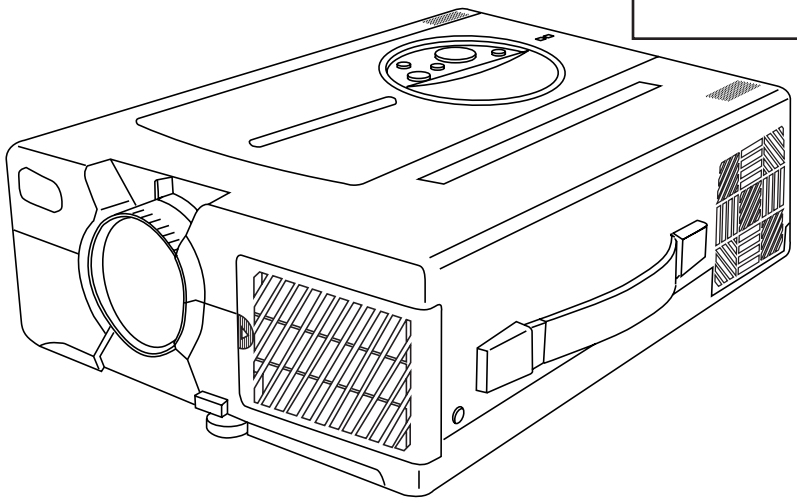
# HITACHI

# SERVICE MANUAL

**SM0503**

**PJL1035 2**
**CPX940WB**
**CPX940E**



## Caution

Be sure to read this manual before servicing. To assure safety from fire, electric shock, injury, harmful radiation and materials, various measures are provided in this Hitachi liquid crystal projector. Be sure to read cautionary items described in the manual to maintain safety before servicing.

## Service Warning

1. When replacing the lamp, avoid burns to your fingers. The lamp becomes very hot.
2. Never touch the lamp bulb with a finger or anything else. Never drop it or give it a shock. They may cause bursting of the bulb.
3. This projector is provided with a high voltage circuit for the lamp. Do not touch the electric parts of power unit (main), when turning on the projector.
4. Do not touch the exhaust fan, during operation.
5. The LCD module ass'y is likely to be damaged. If replacing the LCD module ass'y, do not hold the FPC of the LCD module ass'y.

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**SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMENT.**

# Liquid Crystal Projector

**February 2000**

# 1. Features

- High brightness, High resolution
- Compact size, light weight for portability
- RGB output terminal
- RS232C Communication
- Mouse emulation
- Complies with VESA DDC1/2B specifications
- Auto-adjustment function

# 2. Specifications

| | | |
|---|---|---|
| Liquid crystal panel | Drive system | TFT active matrix |
| | Panel size | 0.9 inches |
| | Number of pixels | 1024 (H) x 768 (V) |
| Lamp | | UHP lamp 150W |
| Video input | System | NTSC , 4.43NTSC , PAL , M-PAL , or SECAM (N-PAL : only compulsion mode) |
| | Level | Composite 1.0Vp-p (75Ω termination)<br>Y/C Y : 1.0Vp-p (75Ω termination)<br>C : 0.286Vp-p (NTSC burst signal, 75Ω termination)<br>0.3Vp-p (PAL/SECAM burst signal, 75Ω termination) |
| RGB input / output | Video signal | Analog RGB input<br>0.7Vp-p (75Ω termination) |
| | Sync signal | H/V separate<br>TTL level |
| Audio | Input | 200mVrms, 20kΩ or less |
| | Output | 0~200mVrms, 1kΩ |
| Speaker output | | 1W + 1W (stereo) |
| Power supply | | AC100~120V/2.9A,AC220~240V/1.3A (50/60Hz) |
| Power consumption | | 260W |
| Dimensions | | 248 (W) x 106 (H) x 336 (D) mm |
| Weight | | 4.5kg |
| Temperature range | | Operation : 0~35˚C<br>Storage : -20~60˚C |
| Accessories | | Remote control ..... 1<br>POWER cord ..... 3<br>BATTERIES LR6 ..... 2<br>RGB cable ..... 1<br>Mac adapter ..... 1<br>Video/Audio cable ..... 1<br>Mouse cable ..... 3<br>S-cable ..... 1<br>Stereo mini cable ..... 1 |

# 3. Names of Each Part

## ● Main Unit

**ON indicator**
This blinks in the standby mode and lights in the operation mode.

**STANDBY / ON button**
Power ON/OFF button.
OFF sets the unit in standby mode.

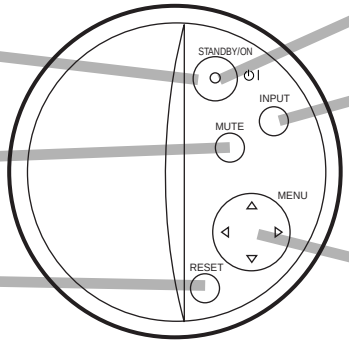
**INPUT button**
To select the input source.
Each time this button is pressed, the input source is changed in sequence as shown below.

RGB1 → RGB2 → VIDEO

**MUTE button**
Silences the sound. (Cancels the mute when the unit is set in mute mode.)

**RESET button**
Resets unit to factory settings.

**MENU button**
Picture adjustments.




**LAMP indicator**
This lights or blinks when the lamp does not light.

**TEMP indicator**
This blinks when fan is abnormal.




**Speaker**

**ZOOM knob**
Adjusts picture size.

**Speaker**

**Remote control sensor**

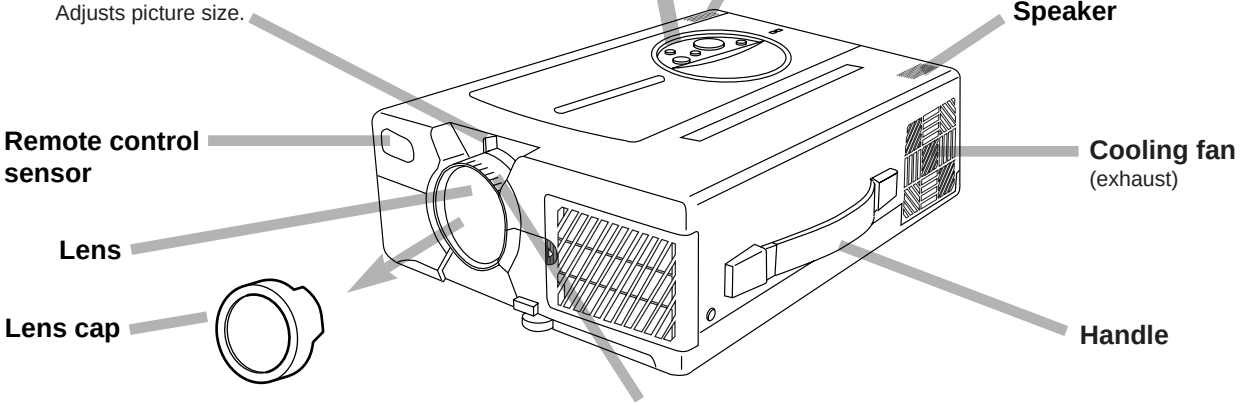
**Cooling fan**
(exhaust)

**Lens**

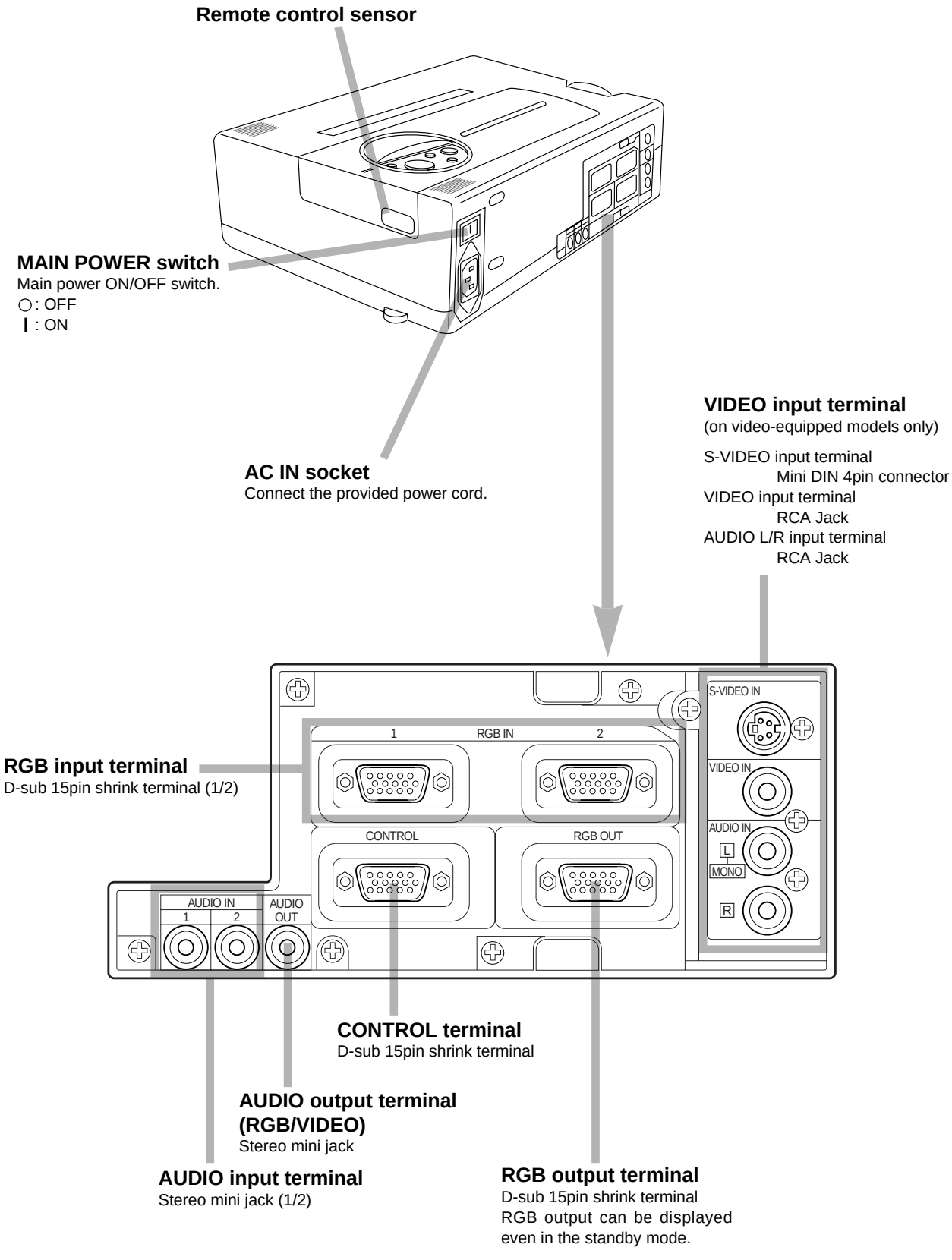
**Lens cap**

**Handle**

**FOCUS ring**
Adjusts focus.



- Use the remote control transmitter within the range of about 16 feet from the remote control sensor and within 30° to both the left and right.


Remote control sensor
MAIN POWER switch
Main power ON/OFF switch.
○: OFF
|: ON
AC IN socket
Connect the provided power cord.
VIDEO input terminal
(on video-equipped models only)
S-VIDEO input terminal
Mini DIN 4pin connector
VIDEO input terminal
RCA Jack
AUDIO L/R input terminal
RCA Jack
RGB input terminal
D-sub 15pin shrink terminal (1/2)
1
RGB IN
2
S-VIDEO IN
VIDEO IN
AUDIO IN
L
MONO
R
CONTROL
RGB OUT
AUDIO IN
1
2
AUDIO OUT
CONTROL terminal
D-sub 15pin shrink terminal
AUDIO output terminal
(RGB/VIDEO)
Stereo mini jack
AUDIO input terminal
Stereo mini jack (1/2)
RGB output terminal
D-sub 15pin shrink terminal
RGB output can be displayed
even in the standby mode.

## ● Remote Control Transmitter

**STANDBY / ON button**
Power ON/OFF button.
OFF sets the unit in standby mode.

**FREEZE Button**
Pressing this button displays a still picture (by freezing).

**MAGNIFY button**
Pressing this button partially magnifies a displayed picture.

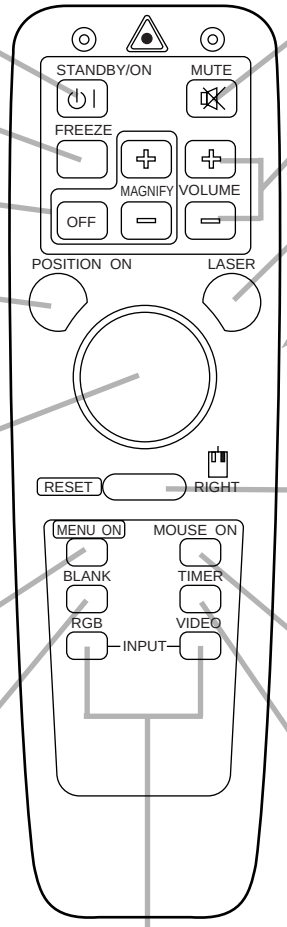
**POSITION button**
Moves the picture by DISK PAD after pressed the POSITION ON button.
(Only RGB signal input)
While the back light on, you can operate POSITION.

**DISK PAD**
① When the back light of MENU ON button on, selects or adjusts the menu item.
② When removes the on-screen menus, works as mouse.
③ When the back light of the POSITION ON button on, moves picture.

**MENU ON button**
Displays the on-screen menus.
And back light on.
While the back light on, you can operate MENU.

**BLANK ON button**
① The blank screen which is displayed by pressing BLANK.
② And the blank screen will be revealed down by pressing BLANK again.

**INPUT SELECT button**
Selects the input source.

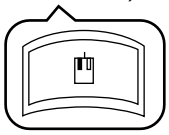



**MUTE button**
Silences the sound. (Cancels the mute when the unit is set in mute mode.)

**VOLUME button**
Adjusts volume. The sound is loud or low while pressing the "+" or "-" button.

**LASER button**
Laser pointer ON button. Use as a stick (for indication).

**MOUSE LEFT button**
Mouse left button is the left click of the mouse. (bottom button)



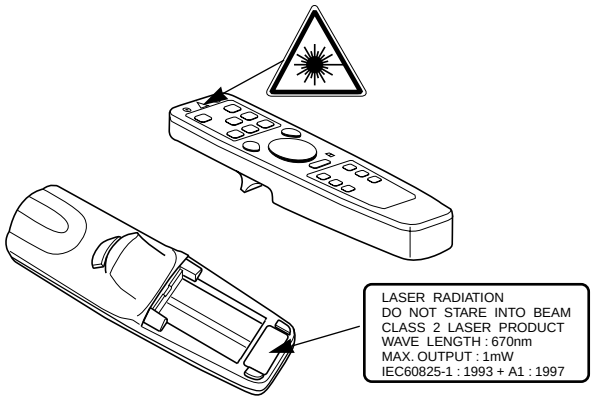
**RESET / RIGHT button**
When displays the on-screen menus, resets the menu item to factory settings.
When operates the mouse emulation, works as right click of mouse in computer mode.
After moving the picture (POSITION ON), resets the position to factory settings.

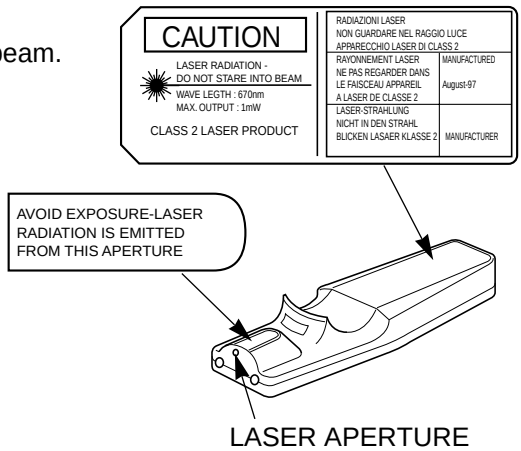
**MOUSE ON button**
Mouse emulation mode starts.
When menu are open or blank screen is displayed or icon of position is displayed, there are stopped and back light off.

**TIMER ON / OFF button**
Displays the setting time by count down.

## Caution Cautions on use of the laser pointer.

- The laser pointer on the remote control unit radiates the laser beam from the laser aperture.
- This laser pointer used as a stick (for indication).
  Do not stare directly into the laser aperture or radiate the laser beam to other persons as the laser emitted is a class 2 laser and it could damage you vision , etc.
  Especially pay attention if children are present.
- The three labels below are caution labels for the laser beam.



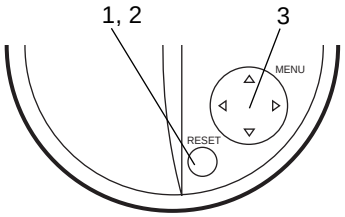
## Function for Service

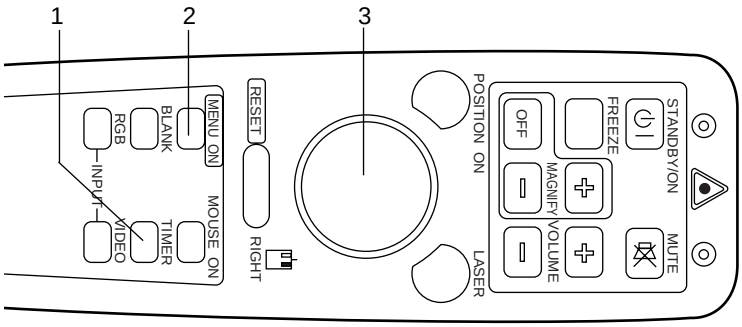
| Function | Operation |
|---|---|
| Displayed the operating time of the lamp | Press the RESET button of the projector or the TIMER button of the remote control, for 3 seconds. |
| Reset the operating time of the lamp | Press the RESET button of the projector or the remote control MENU.<br>(During be displayed the operating time of the lamp.) |
| Displayed the operating time of the projector | Press the MUTE button of the projector or the remote control, for 3 seconds.<br>(During be displayed the operating time of the lamp.) |

When replacing the lamp, Reset the operating time of lamp.

## Reset the lamp timer :

If you have replaced the lamp after the lamp replacement time had expired, perform the procedure explained below within 10 minutes after the power is turned on. The power will turn off automatically when the 10-minute period expires.




1) Press the RESET button on projector for 3 seconds or remote control TIMER button for 3 seconds and display the total lamp used time.
   - When accumulated operation time of the lamp reaches 1700 hours (after the second time : 2000 hours), the following display will appear at the bottom of the screen.
2) Press the RESET button on projector or remote control MENU ON button during displaying the lamp used time.
3) Select the “0” on the screen using the MENU ( ◀ ) button or DISK PAD.DISK PAD.

LAMP 1500 hr

LAMP 1500 □→ 0■ CANCEL

# Message Table

## On-screen display

The following messages are displayed on the screen.

| MESSAGE | Action |
|---|---|
| CHANGE THE LAMP<br>AFTER REPLACING LAMP,<br>RESET THE LAMP TIMER. | The lamp has been in service for long. Replacement with a new lamp is recommended. The lamp will go off automatically when the lamp replacement time is exceeded. *1 |
| CHANGE THE LAMP<br>AFTER REPLACING LAMP,<br>RESET THE LAMP TIMER.<br>THE POWER WILL TURN<br>OFF AFTER * Hr. | The total lamp service time will exceed the lamp replacement time in * hours. The lamp will go off automatically when the lamp replacement time is exceeded. Replace with a new lamp before that. *1<br>The asterisk (*) indicates the number of hours remaining before the lamp goes off automatically. |
| Blinking of<br>CHANGE THE LAMP | The total lamp service time has exceeded the lamp replacement time. The lamp will go off automatically about 10 minutes after it starts blinking. Replace with a new lamp.*2 |
| NO INPUT IS DETECTED | Signal is hot input. |
| SYNC IS OUT OF RANGE | The horizontal frequency of the input signal exceeds the range of the projector, it cannot be displayed. |

*1 This message are not displayed after 3 minutes.

But this message are displayed when you turn on the power again.

*2 It is possible to again turn on the power, however the power will go off after about 10 minutes.

## Indicator display

The ON indicator, LAMP indicator and TEMP indicator will light or blink in the following cases.

| ON indicator | LAMP indicator | TEMP indicator | Meaning | Remedy |
|---|---|---|---|---|
| Lights orange | Goes off | Goes off | Standby mode | |
| Blinks green | Goes off | Goes off | During warming up | |
| Lights green | Goes off | Goes off | During operation *1 | |
| Blinks orange | Goes off | Goes off | During cooling down | |
| Lights red | Lights red | Goes off | Lamp cannot light *2 | Cool projector by power off for 45 minutes.<br>If the indicator is still it, lamp may be defective. Replace. |
| Lights red | Blinks red | Goes off | Lamp is not inserted or the lamp door open | Securely insert the lamp or close the lamp door. |
| Lights red | Goes off | Blinks red | Cooling fan accidented | Replace fan. |
| Blinks red | Blinks red | Goes off | The total lamp service time has exceeded the lamp replacement time. | Replace lamp and reset the accumulated lamp operation time. |

# *4. Adjustment*

## 4 - 1 Before adjusting.

4-1-1 ADJUSTMENT menu.

The ADJUSTMENT menu is needed at all adjustments.

How to set up ADJUSTMENT menu follow these;

a. Push the MENU button.

b. Keep the RESET button pushing for a several seconds while the PICTURE menu is displayed.

Note: All parameters used in these adjustment are printed in boldface as shown in Fig.4-2-a and Fig.4-2-b.

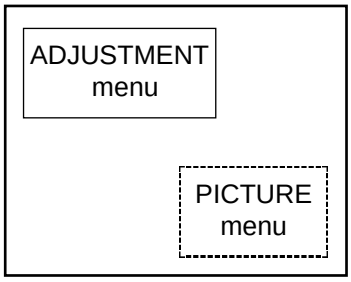



Fig.4-1 ADJUSTMENT menu

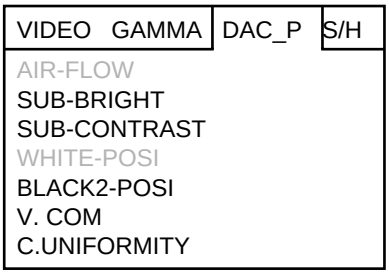



Fig.4-2-a Parameters in the DAC_P of the ADJUSTMENT menu.

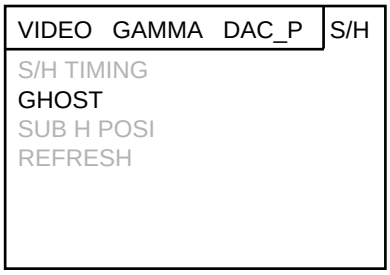



Fig.4-2-b Parameters in the S/H of the ADJUSTMENT menu.

4-1-2 Selection of adjustment.

When any parts in the table 4-1 is changed, choose the profer adjusting items with the chart. Keep the adjusting order, from upper to lower in it. For example, adjust "White balance" firstly and "Ghost" next at replacement of the PWB ass'y color.

Table 4-1 : Relation between the replaced part and adjustment.

| Replaced part | Adjustment | | |
|---|---|---|---|
| | P.O.filter (Chap.4-2) | White balance (Chap.4-3) | Ghost (Chap.4-4) |
| Dichroic optics unit | Yes | No | No |
| LCD/LENS prism ass'y | Yes | Yes | Yes |
| PWB ass'y drive | No | Yes | Yes |
| PWB ass'y color | No | Yes | No |

"Yes" means need for adjustment, "No" means no need for adjustment.

4-1-3 Setting of condition before adjustment.

1. Apply heat-running for 10 minutes or more before adjustment.
2. Project 40 inches size image with zoom set to the widest.
3. Press the RESET button on the remote controller to set picture adjustment to NORMAL.
4. Use a darkroom whose luminance is less than 2[lx].

## 4 - 2 P.O.filter adjustment.

Before adjusting, input the 0.0Vp-p signal to check the black image. If the image is not as dark as other set, continue this procedure.

1. Make sure the AC power cord is unplugged.
2. Remove the PWB ass'y DRIVE and the DUST COVER.
3. Loosen the screws on P.O.filters for GREEN and RED. (See Fig.4-3-(a).)
   Remark: Don't touch the screw on the P.O.filter for BLUE.
4. Put back the PWB ass'y DRIVE where it belongs without screws and make connections with peripheral devices. Then get on the projector.
5. Use the XGA VESA(60) timing signal to Input 0.0Vpp black pattern.
6. Slide the P.O.filter for GREEN on its base to find out where a whole image is darkest by visual check. At the best position, tighten the screw a little so that the filter cannot shift. (See Fig.4-3-(b).)
7. Slide the P.O.filter for RED on its base in order to get rid of the reddish tint of the image by visual check. After finding out the best position, tighten the screw in a little order not to change the color of the image. (See Fig.4-3-(b).)
8. Remove the PWB ass'y DRIVE again to tighten up the screws of both P.O.filters.
9. Put on the DUST COVER and the PWB ass'y DRIVE and make original connections with all of peripheral parts.
10. Reinstall the UPPER CASE and tighten all screws.

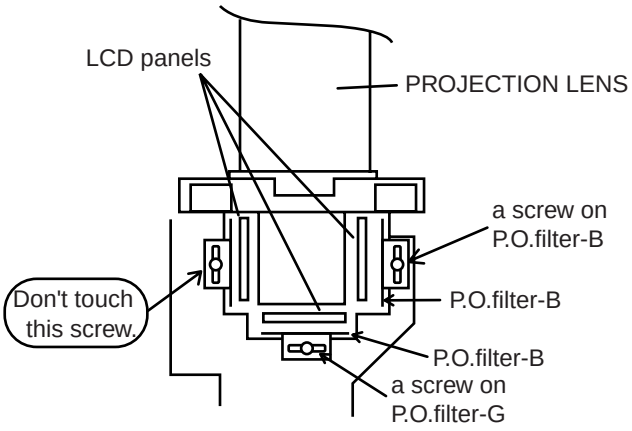



Fig.4-3-(a) Top view of P.O.filters

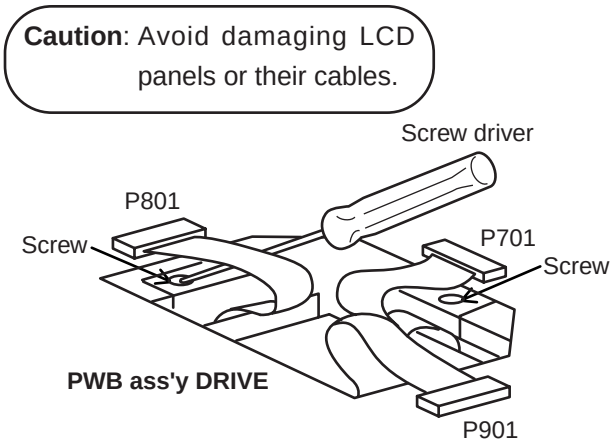



Fig.4-3-(b) How to tighten screws

## 4 - 3 White balance adjustment

**Preparations for adjustment**

4-3-1 Flicker adjustment.

Refer to the attached drawing (Fig.4-4).

1. Use the XGA VESA(60) timing signal to input a 0.35Vp-p R primary color signal for every other line.
2. Use DAC_P - V.COM - R in the adjustment menu to adjust until flicker is minimum on a whole image.
3. Use the XGA VESA(60) timing signal to input a 0.35Vp-p G primary color signal for every other line.
4. Use DAC_P - V.COM - G in the adjustment menu to adjust until flicker is minimum on a whole image.
5. Use the XGA VESA(60) timing signal to input a 0.35Vp-p B primary color signal for every other line.
6. Use DAC_P - V.COM - B in the adjustment menu to adjust until flicker is minimum on a whole image.

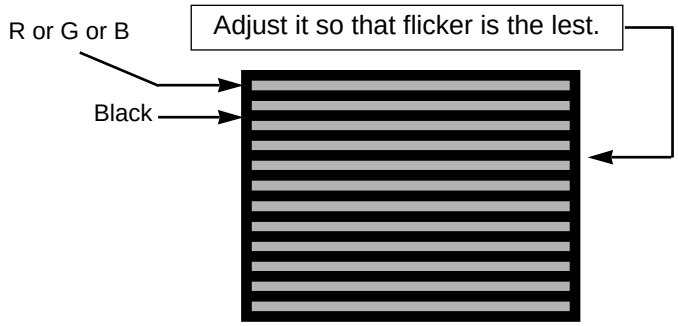



Fig.4-4 Test pattern for the flicker adjustment.

4-3-2 Adjustment of color uniformity

1. Input gray pattern at 0.35Vp-p with a timing signal of XGA VESA(60).
2. Set C.UNIFORMITY - SWITCH in the adjustment menu to OFF.
3. Check the color unevenness of the original image.
4. Continue this adjustment unless color uniformity is good.
5. Set C.UNIFORMITY - SWITCH in the adjustment menu to ON.
6. Adjust following parameters to make better color balance with same input signal.
   a. Adjust "C. UNIFORMITY - H - R -RP" so that color balance of left and right side is best by visual check.
      This is control correction wave for Horizontal Saw.
   b. Adjust "C. UNIFORMITY - H - R -PB" so that color balance of center and side is best by visual check.
      This is control correction wave for Horizontal Parabola.
   c. Adjust "C. UNIFORMITY - H - B -RP" so that color balance of left and right side is best by visual check.
      This is control correction wave for Horizontal Saw.
   d. Adjust "C. UNIFORMITY - H - B -PB" so that color balance of center and side is best by visual check.
      This is control correction wave for Horizontal Parabola.
   e. Adjust "C. UNIFORMITY - V - B -RP" so that color balance of top and bottom is best by visual check.
      This is control correction wave for Vertical Saw.

"C. UNIFORMITY - H - R -RP"
: horizontal correction for R horizontal Saw
"C. UNIFORMITY - H - R -PB"
: horizontal correction for R horizontal Parabola
"C. UNIFORMITY - H - B -RP"
: horizontal correction for B horizontal Saw
"C. UNIFORMITY - H - B -PR"
: horizontal correction for B horizontal Parabola
"C. UNIFORMITY - V - B -RP"
: vertical correction for B vertical Saw.

4-3-3 The luminance adjustment.

Use Minolta CL-100 at measurement and adjustment.

1. Maximize CONTRAST and BRIGHT in the picture menu.
2. Use the XGA VESA(60) timing signal to input a 0.7Vpp green primary signal and measure the luminance at the center of the image. Suppose the reading is “A”.
3. Normalize CONTRAST and BRIGHT in the picture menu.
4. Use the XGA VESA(60) timing signal to input a 0.21Vpp green primary signal. Adjust the luminance with SUB-BRIGHT - W to
   Ax0.09 ± 10 [lx].
5. Use the XGA VESA(60) timing signal to input a 0.7Vpp green primary signal. Adjust the luminance with SUB-CONTRAST - W to
   Ax0.95 ± 20 [lx].
6. Return to procedure 4 to check the luminance is within the specification. If it is out of the specification, repeat the procedure 4 - 5.
7. Use the XGA VESA(60) timing signal to input a 0.0Vp-p black pattern. Adjust the luminance with DAC_P - BLACK2-POSI - W to
   $Ax0.009^{+1}_{-0}$ [lx].
8. Use the XGA VESA(60) timing signal to input 0.7Vpp 16 step gray scale signal. See the two darkest steps if they can be distinguished. Use DAC_P - BLACD2-POSI - G in order to make a little different luminance between 1st step and 2nd step by visual check. (See Fig.4-5.)

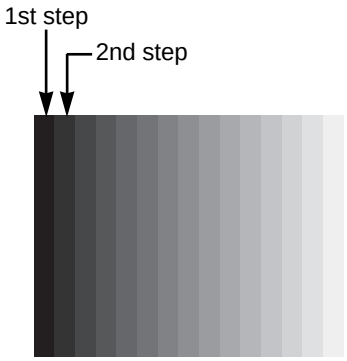



Fig.4-5 16 step gray scale

4-3-4. Adjustment of the white balance.

Use Minolta CL-100 at measurement and adjustment.

1. Low brightness white balance.
   a. Input gray pattern at 0.21Vp-p with a timing signal of XGA VESA(60).
   b. Adjust DAC_P - SUB BRIGHT - R and DAC_P - SUB BRIGHT - B so that the chromaticity at the center of the picture is x=0.28 ± 0.005,y=0.34 ± 0.005(low-brightness white balance)
2. Medium brightness white balance.
   a. Input gray pattern at 0.52Vpp with a timing signal of XGA VESA(60).
   b. Adjust DAC_P - SUB CONTRAST - R and DAC_P - SUB CONTRAST - B so that the chromaticity at the center of the picture is x=0.28 ± 0.005,y=0.345 ± 0.005(middle-brightness white balance)
3. Return to 1 to check low-brightness white balance, and repeat 1 to 2 until both middle-brightness and low-brightness white balance are adjusted within their target at the same time.
4. Black white balance.
   a. Input gray pattern at 0.07Vpp with a timing signal of XGA VESA(60).
   b. Adjust DAC_P - BLACK POSI - R and DAC_P - BLACK POSI - B so that the chromaticity at the center of the picture is x=0.27 ± 0.005,y=0.34 ± 0.005.
5. Compare the brightness between the darkest stepsand the 2nd darkest one visually. Unless the difference is visible, go to the procedure a - d below.
   a. Input a 0.7Vpp 16 steps primary blue signal with a timing signal of XGA VESA(60).
   b. Adjust DAC_P - BLACK2 POSI - B so that the brightness between 1st and 2nd step is different slightly. (See Fig. 4-5.)
   c. Input a 0.7Vpp 16 steps primary red signal with a timing signal of XGA VESA(60).
   d. Adjust DAC_P - BLACK2 POSI - R so that the brightness between 1st and 2nd step is different slightly. (See Fig. 4-5.)
6. Repeat the procedure 1 to 4 so that the low-brightness white balance, the medium-brightness white balance and the black white balance are within their targets at the same time.

   Remark; You don't need to take care of the target of the black white balance, when it has been adjusted visually in the procedure 5.

## 4 - 4 Ghost adjustment

**Preparations for adjustment**

1. Input a 0.7Vpp cross-hatch pattern with a timing signal of XGA VESA(60).
2. Adjust "H.PHASE" in the picture menu so that the vertical lines of cross-hatch pattern are seen clearest.

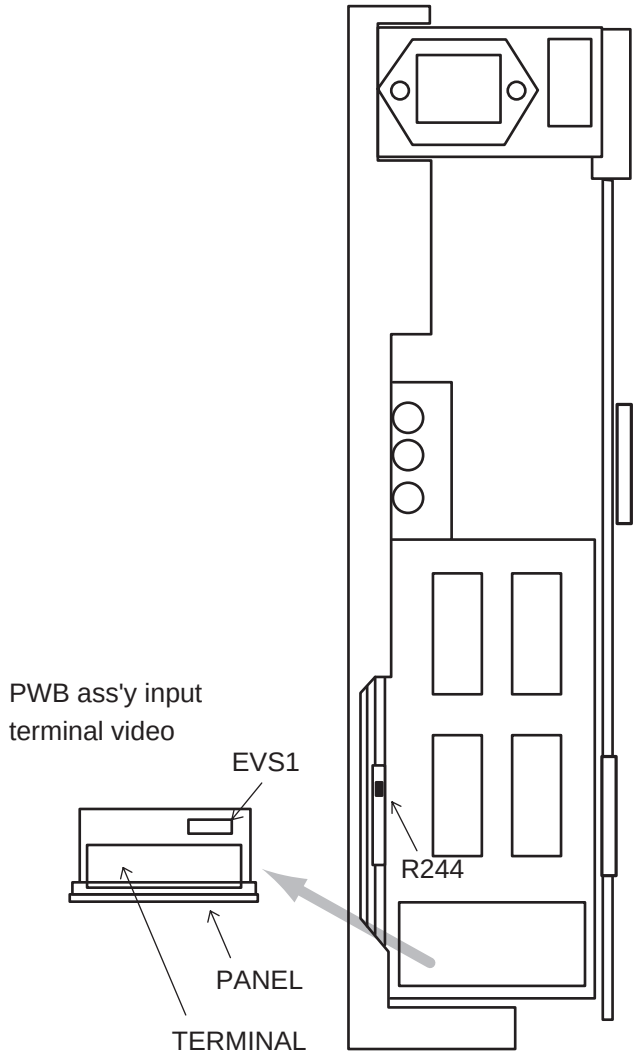
**Adjustment procedure**

1. Position the cursor on S/H - GHOST in the ADJUSTMENT menu and push the RESET button to initialize this parameter.
2. Decrease the value of the S/H - GHOST in the ADJUSTMENT menu until the ghost image appears. Suppose this figure "B". (See the example below.)
3. Set the parameter to "B + 2".

   Example:

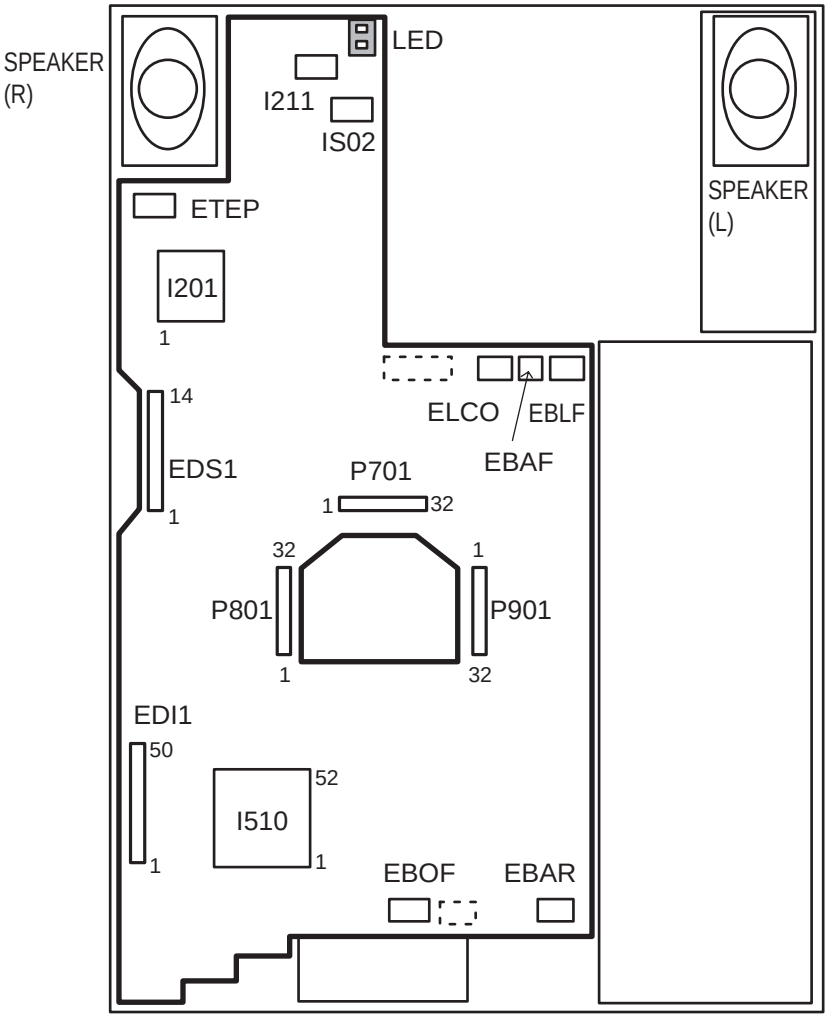
| Adjusted value | Image | |
|---|---|---|
| 6 | No ghost | |
| 5 | Faint ghost | → B=5 |
| 4 | Ghost | |

   In this case, S/H - GHOST is set to 7 (=5+2).



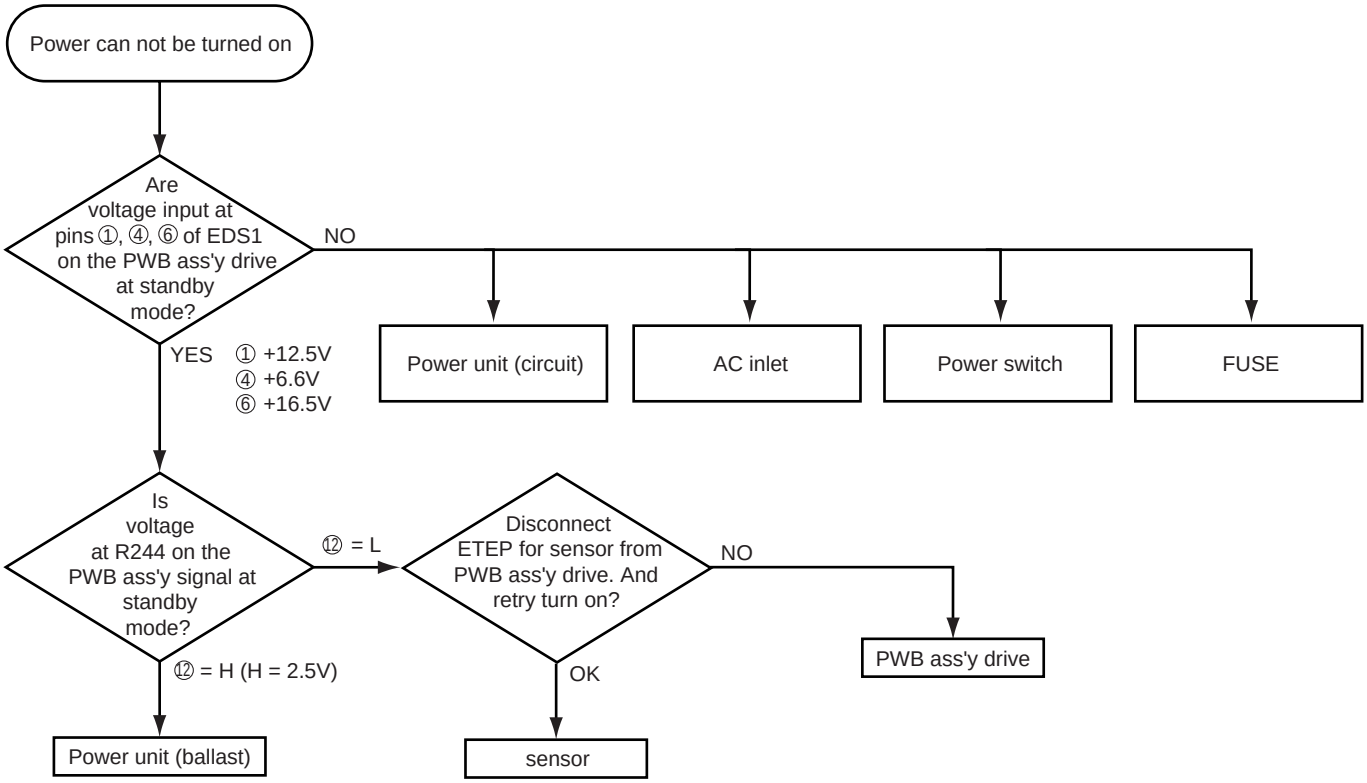

< SIDE VIEW >

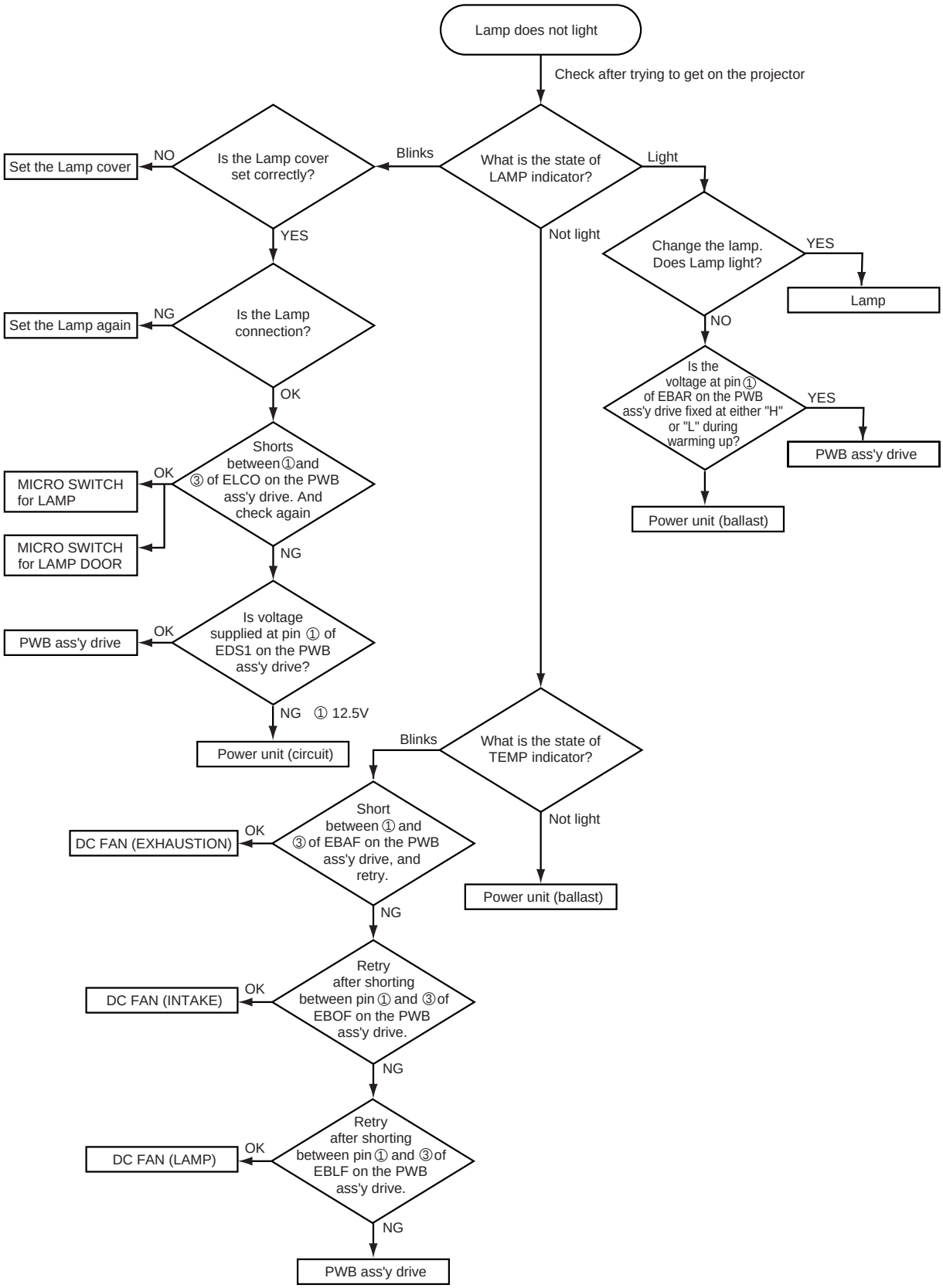
without upper case & I/O DECO PANEL

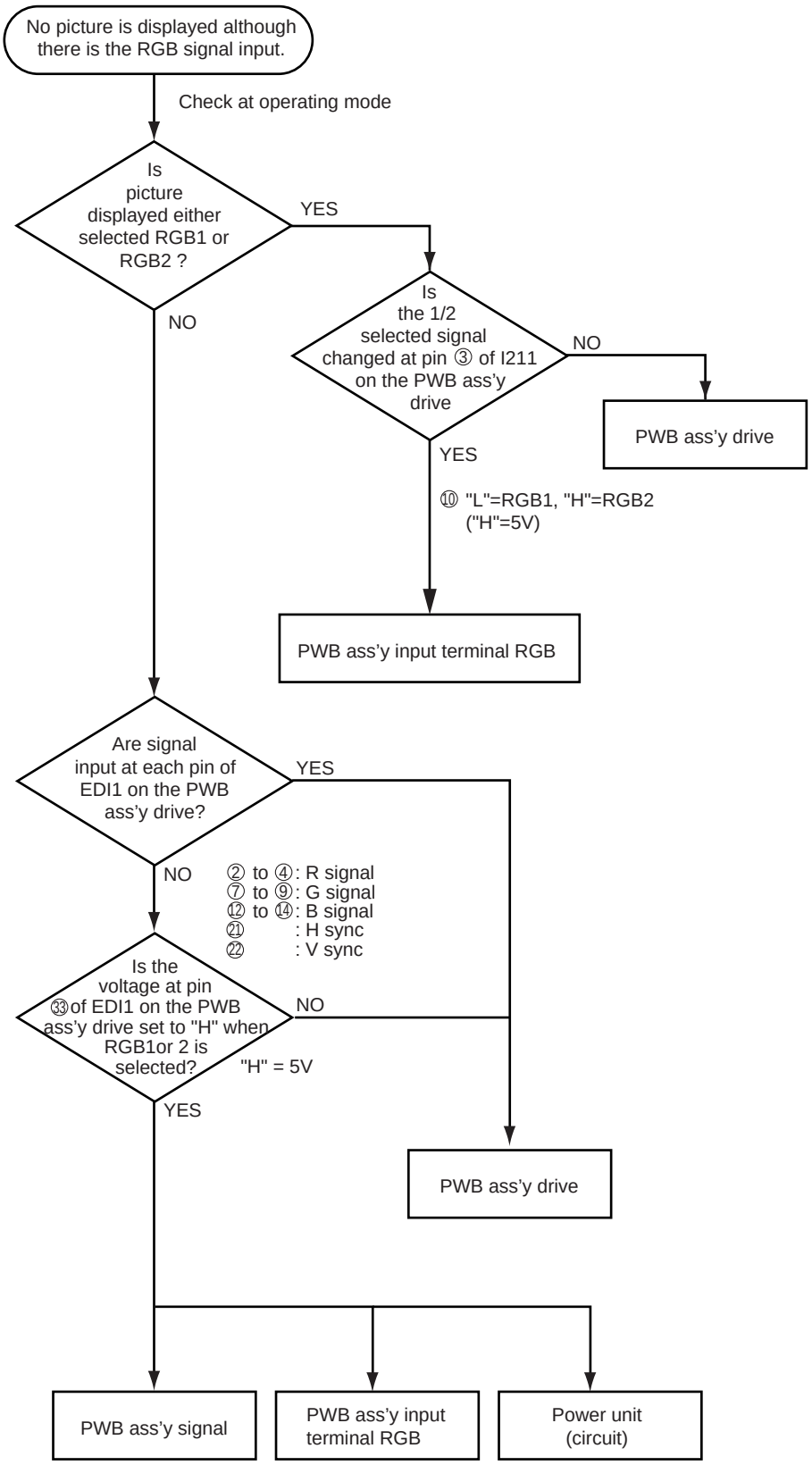


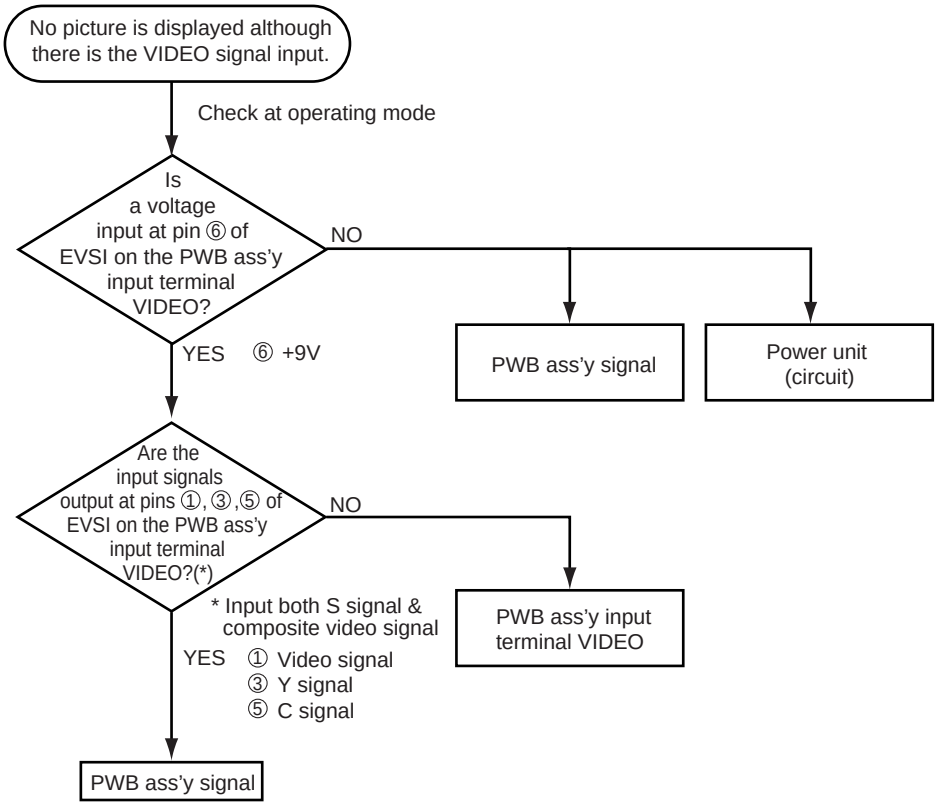

< TOP VIEW >

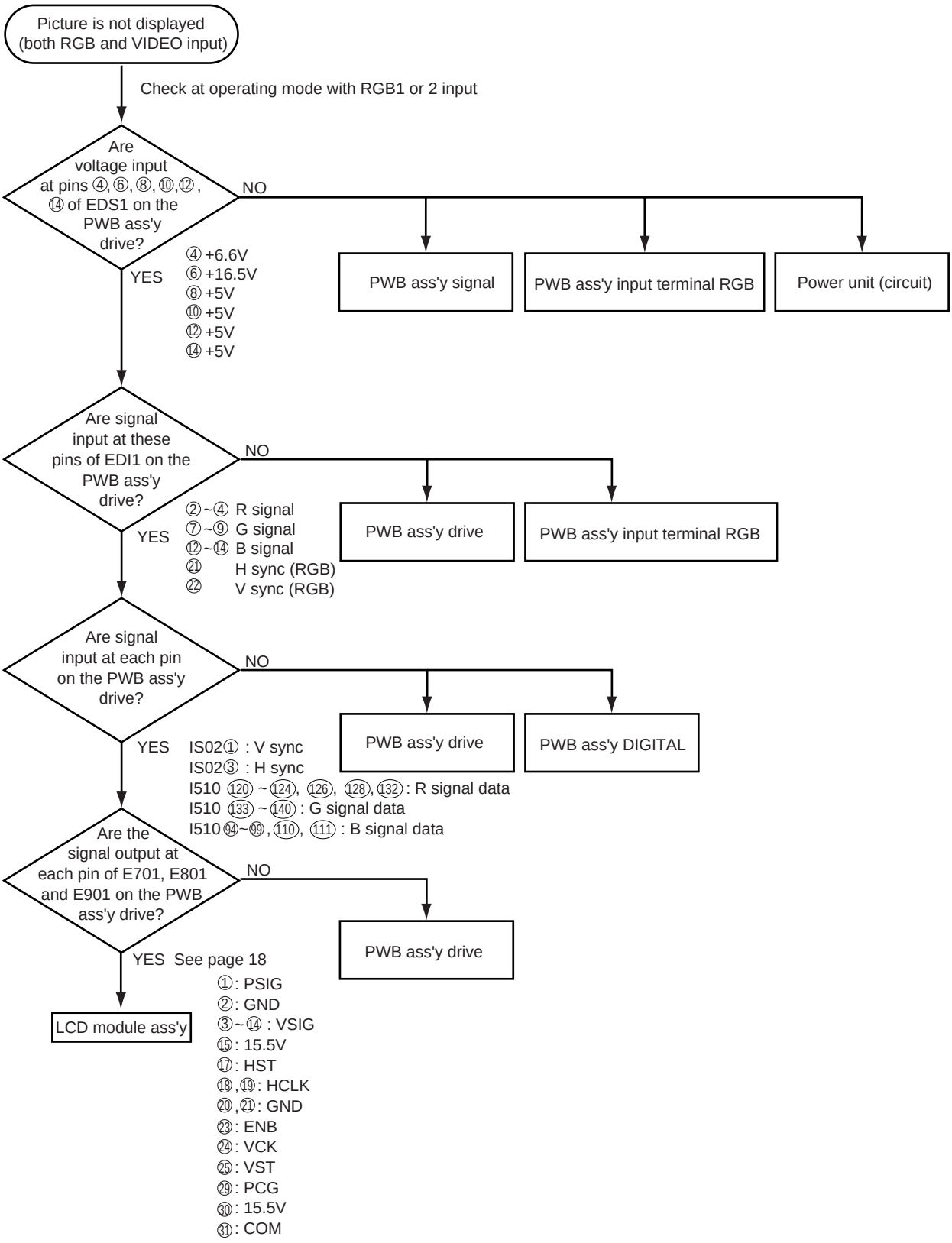
without upper case

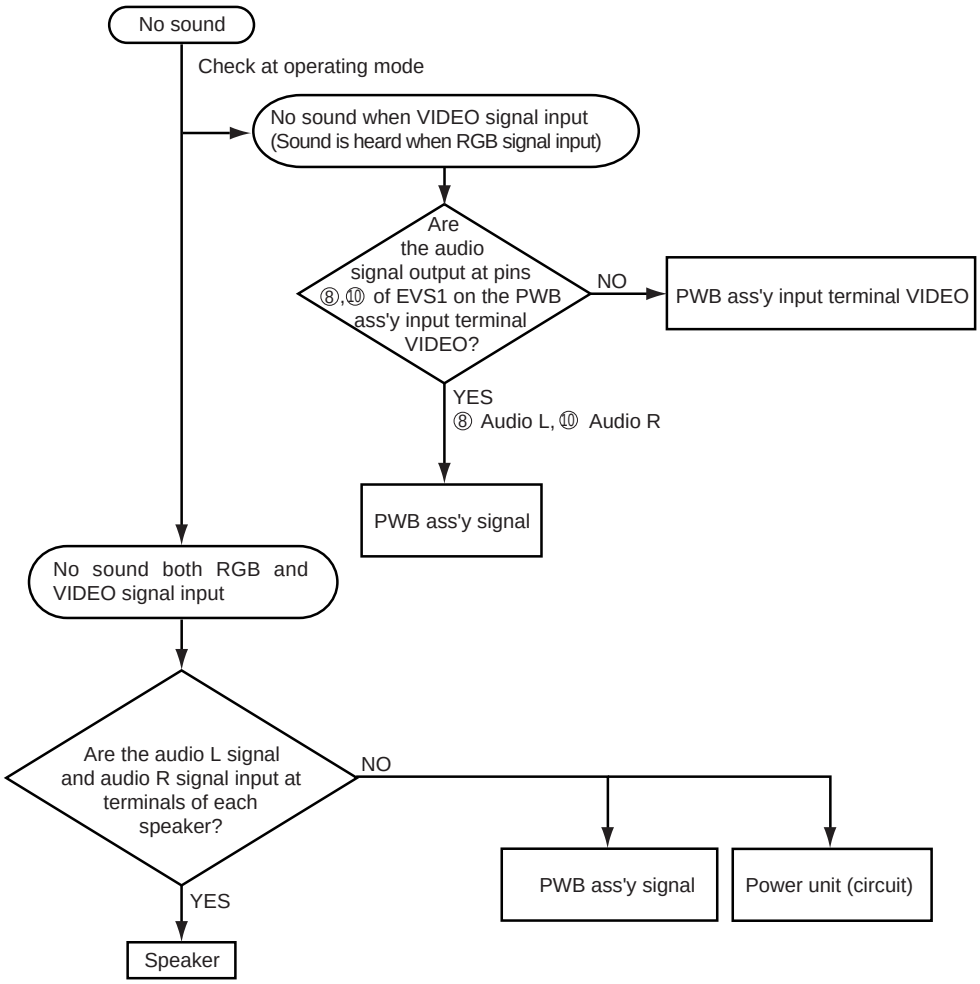

Power can not be turned on
Are voltage input at pins ①, ④, ⑥ of EDS1 on the PWB ass'y drive at standby mode?
NO
YES
① +12.5V
④ +6.6V
⑥ +16.5V
Power unit (circuit)
AC inlet
Power switch
FUSE
Is voltage at R244 on the PWB ass'y signal at standby mode?
⑫ = L
Disconnect ETEP for sensor from PWB ass'y drive. And retry turn on?
NO
PWB ass'y drive
⑫ = H (H = 2.5V)
OK
Power unit (ballast)
sensor

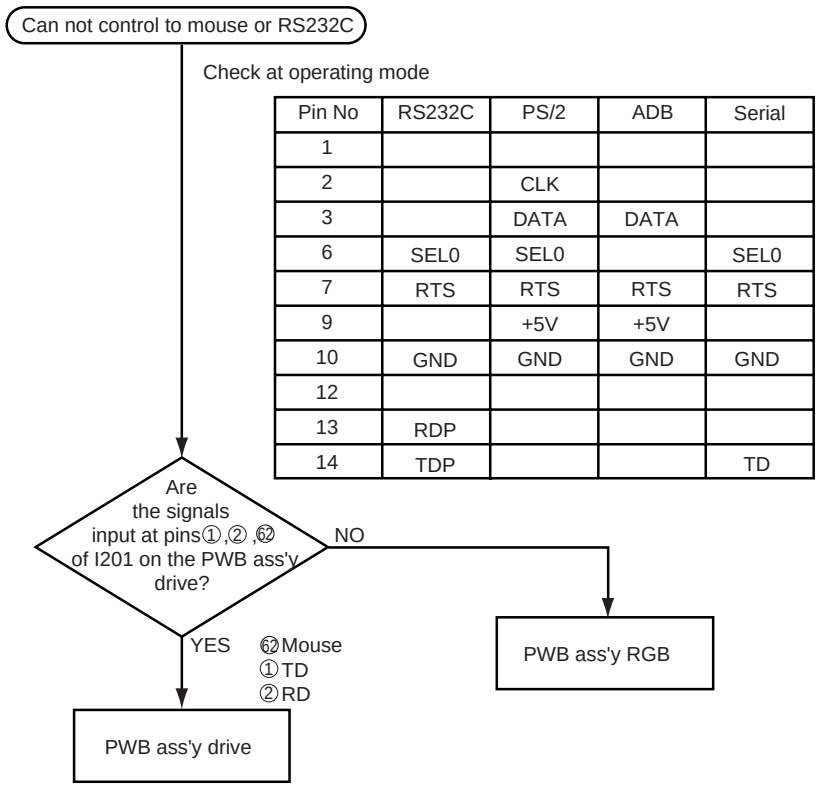

Lamp does not light
Check after trying to get on the projector
What is the state of LAMP indicator?
Blinks
Light
Not light
Is the Lamp cover set correctly?
NO
Set the Lamp cover
YES
Is the Lamp connection?
NG
Set the Lamp again
OK
Shorts between ① and ③ of ELCO on the PWB ass'y drive. And check again
OK
MICRO SWITCH for LAMP
MICRO SWITCH for LAMP DOOR
NG
Is voltage supplied at pin ① of EDS1 on the PWB ass'y drive?
OK
PWB ass'y drive
NG ① 12.5V
Power unit (circuit)
Change the lamp. Does Lamp light?
YES
Lamp
NO
Is the voltage at pin ① of EBAR on the PWB ass'y drive fixed at either "H" or "L" during warming up?
YES
PWB ass'y drive
Power unit (ballast)
What is the state of TEMP indicator?
Blinks
Not light
Short between ① and ③ of EBAF on the PWB ass'y drive, and retry.
OK
DC FAN (EXHAUSTION)
NG
Retry after shorting between pin ① and ③ of EBOF on the PWB ass'y drive.
OK
DC FAN (INTAKE)
NG
Retry after shorting between pin ① and ③ of EBLF on the PWB ass'y drive.
OK
DC FAN (LAMP)
NG
PWB ass'y drive
Power unit (ballast)


No picture is displayed although there is the RGB signal input.
Check at operating mode
Is picture displayed either selected RGB1 or RGB2 ?
YES
NO
Is the 1/2 selected signal changed at pin ③ of I211 on the PWB ass'y drive
NO
PWB ass'y drive
YES
⑩ "L"=RGB1, "H"=RGB2 ("H"=5V)
PWB ass'y input terminal RGB
Are signal input at each pin of EDI1 on the PWB ass'y drive?
YES
NO
② to ④: R signal
⑦ to ⑨: G signal
⑫ to ⑭: B signal
㉑ : H sync
㉒ : V sync
Is the voltage at pin ㉝of EDI1 on the PWB ass'y drive set to "H" when RGB1or 2 is selected?
"H" = 5V
NO
YES
PWB ass'y drive
PWB ass'y signal
PWB ass'y input terminal RGB
Power unit (circuit)


No picture is displayed although there is the VIDEO signal input.
Check at operating mode
Is a voltage input at pin ⑥ of EVSI on the PWB ass'y input terminal VIDEO?
NO
YES ⑥ +9V
PWB ass'y signal
Power unit (circuit)
Are the input signals output at pins ①, ③, ⑤ of EVSI on the PWB ass'y input terminal VIDEO?(*)
NO
* Input both S signal & composite video signal
YES ① Video signal
③ Y signal
⑤ C signal
PWB ass'y input terminal VIDEO
PWB ass'y signal


Picture is not displayed (both RGB and VIDEO input)
Check at operating mode with RGB1 or 2 input
Are voltage input at pins ④, ⑥, ⑧, ⑩, ⑫, ⑭ of EDS1 on the PWB ass'y drive?
NO
YES
④ +6.6V
⑥ +16.5V
⑧ +5V
⑩ +5V
⑫ +5V
⑭ +5V
PWB ass'y signal
PWB ass'y input terminal RGB
Power unit (circuit)
Are signal input at these pins of EDI1 on the PWB ass'y drive?
NO
YES
②~④ R signal
⑦~⑨ G signal
⑫~⑭ B signal
㉑ H sync (RGB)
㉒ V sync (RGB)
PWB ass'y drive
PWB ass'y input terminal RGB
Are signal input at each pin on the PWB ass'y drive?
NO
YES
IS02① : V sync
IS02③ : H sync
I510 ⑫⓪ ~ ⑫④, ⑫⑥, ⑫⑧, ⑬② : R signal data
I510 ⑬③ ~ ⑭⓪ : G signal data
I510 ⑨④~⑨⑨, ⑪⓪, ⑪① : B signal data
PWB ass'y drive
PWB ass'y DIGITAL
Are the signal output at each pin of E701, E801 and E901 on the PWB ass'y drive?
NO
YES See page 18
①: PSIG
②: GND
③~⑭ : VSIG
⑮: 15.5V
⑰: HST
⑱, ⑲: HCLK
⑳, ㉑: GND
㉓: ENB
㉔: VCK
㉕: VST
㉙: PCG
㉚: 15.5V
㉛: COM
PWB ass'y drive
LCD module ass'y

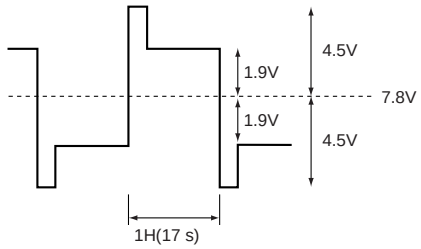


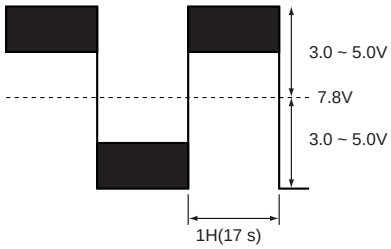

| Pin No | RS232C | PS/2 | ADB | Serial |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | CLK | | |
| 3 | | DATA | DATA | |
| 6 | SEL0 | SEL0 | | SEL0 |
| 7 | RTS | RTS | RTS | RTS |
| 9 | | +5V | +5V | |
| 10 | GND | GND | GND | GND |
| 12 | | | | |
| 13 | RDP | | | |
| 14 | TDP | | | TD |

# *Signal Waveforms of P701, P801 and P901 (Input signal is VGA3)*

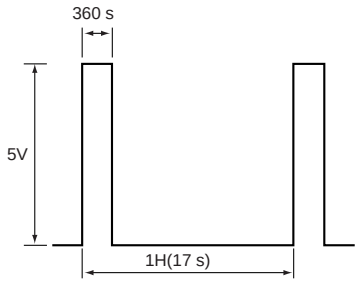
① PSIG (Uniformity Signal)



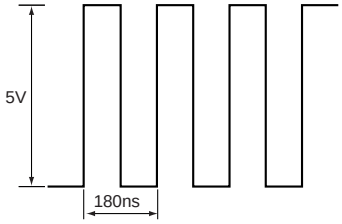

③~ ⑭ VIDEO SIGNAL



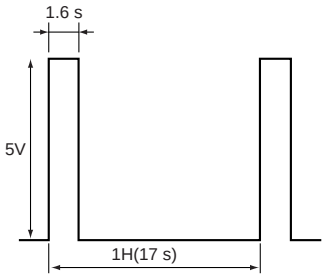

⑰ HST



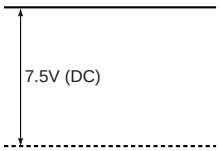

⑱, ⑲ HCK1,HCK2



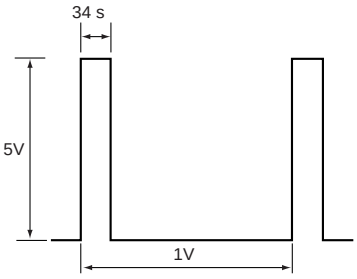

㉙ PCG



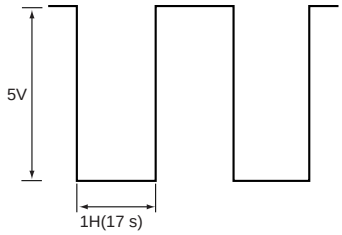

㉛ COM



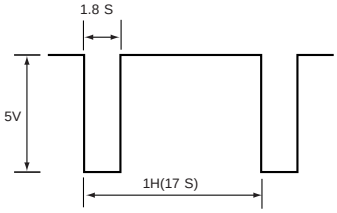

㉕ VST




㉔ VCK




㉓ ENB

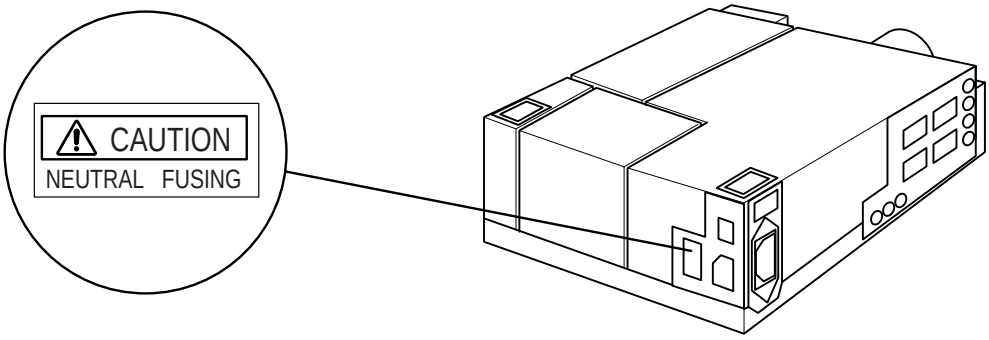


# *6. Service Points*

6 - 1 POINT

## Caution for NEUTRAL FUSING.

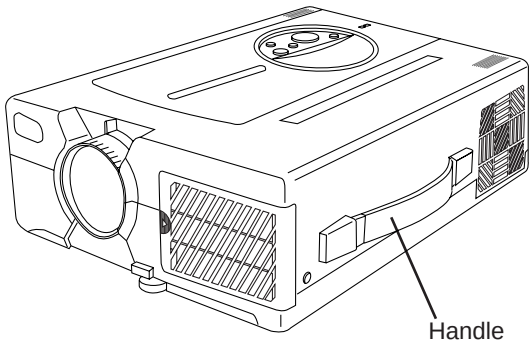
The fuse is in NEUTRAL line on this model. Therefore high voltage is still supplied to circuit after fuse is blown. Always unplug the AC cord from the socket before removing Upper case and be careful not to get a shock when checking waveforms and voltage without Upper case.




<Without Upper case>

● **When Upper case is removed**

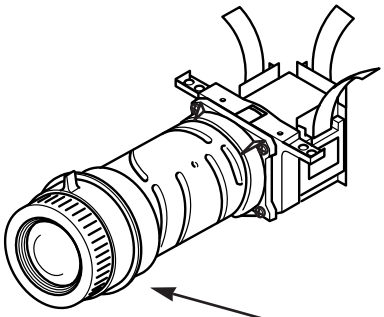
Upper case is lifted as the figure with pulling a handle.




● **Before Replacing the LCD / Lens Prism**

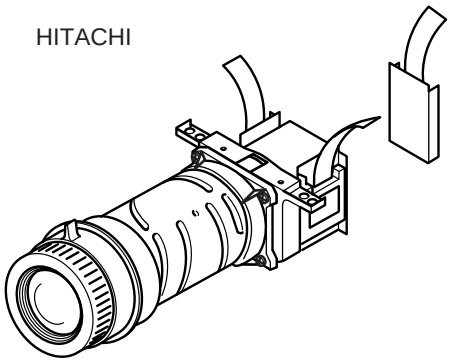
You should not replace separately the parts of the liquid crystal LCD / Lens Prism because it works properly only when used together. Therefore, regarding these parts, you can either replace part , LCD / Lens Prism Ass'y, or send the whole unit LCD / Lens Prism Ass'y back to Hitachi, where we will replace the malfunctioning part, recondition the device and send it back to you. In that case please contact our distributor.

DISTRIBUTOR



- Do not disassemble the unit because replacement of separate parts is not possible.
- For repairs of the product, please contact our distributor.

HITACHI




Replacement of G Panel → Reconditioning

Return

## 6 - 2 Service point of principal parts

(1) Removing the UPPER CASE ASS'Y.

1. Remove 9 screws and remove the UPPER CASE ASS'Y.

(2) Removing the PWB ASS'Y DRIVE.

1. Remove the UPPER CASE ASS'Y.(Refer to item 6-2(1))
2. Release the lock of the connector housing and disconnect the FPC of the LCD module ass'y.
3. Remove 4 screws and disconnect 10 connectors and remove the PWB ASS'Y DRIVE.

(3) Removing the SPEAKER.

1. Remove 2 screws and disconnect a wire-to-wire connector to remove each SPEAKER.

(4) Removing the POWER UNIT(BALLAST).

1. Remove a screw to remove the metallic stopper on LAMP connector.
2. Remove 4 screws on Ballast holder and disconnect lamp connector to remove the POWER UNIT(BALLAST).

(5) Removing the LCD/LENS PRISM ASS'Y.

1. Remove the UPPER CASE ASS'Y.(Refer to item 6-2(1))
2. Remove the PWB ASS'Y DRIVE.(Refer to item 6-2(2))
3. Remove a screw to remove the filter to protect LCD panels.
4. Remove 2 screws to remove the LCD/LENS PRISM ASS'Y.

(6) Removing the DICHROIC OPTICS UNIT.

1. Remove the LAMP COVER ⑤ and remove the LAMP.
2. Remove the UPPER CASE ASS'Y.(Refer to item 6-2(1))
3. Remove the PWB ASS'Y DRIVE.(Refer to item 6-2(2))
4. Remove the SPEAKER.(Refer to item 6-2(3))
5. Remove the PWB ASS'Y POWER UNIT(BALLAST).(Refer to item 6-2(4))
6. Remove the HOOD inside DC FAN(POWER) ㊱ by two clips.
7. Remove a screw on the filter for LCD panels to remove the filter.
8. Remove tape(black) on the DICHROIC OPTICS UNIT and disconnect all wire-to-wire connectors.
9. Remove 3 screws and remove the DICHROIC OPTICS UNIT.

(7) Removing the PWB ASS'Y INPUT TERMINAL RGB.

1. Remove a screw and remove the PWB ASS'Y INPUT TERMINAL VIDEO.
2. Remove the UPPER CASE ASS'Y.(Refer to item 6-2(1))
3. Remove the PWB ASS'Y DRIVE.(Refer to item 6-2(2))
4. Remove 3 screws and remove the PWB ASS'Y INPUT TERMINAL PANEL.
5. Remove 2 screws and remove the PWB INPUT TERMINAL RGB with RGB metal.

(8) Removing the DC FAN(POWER).

1. Remove the UPPER CASE ASS'Y.(Refer to item 6-2(1))
2. Remove the PWB ASS'Y DRIVE.(Refer to item 6-2(2))
3. Remove the SPEAKER-R.(Refer to item 6-2(3))
4. Remove the PWB ASS'Y POWER UNIT(BALLAST).(Refer to item 6-2(4))
5. Remove the DICHROIC OPTICS UNIT.(Refer to item 6-2(6))
6. Remove 3 screws to remove the DC FAN(POWER).

## 6 - 3 About Lamp Replacement

Light source lamp has a service life.
The picture will become dark or color will be poor when the lamp is used for a long time.
If usage of lamp is continued in such cases, it could cause a malfunction. Replace lamp with new one.
As reference for replacement time, indicator will operate or message will be displayed when the power is turned on, as shown on page 6, 7. In these cases the lamp should be replaced.

Caution Also LAMP indicator will light when the lamp becomes too hot. Turn off the power and let the projector cool for 45 minutes. Turn on.

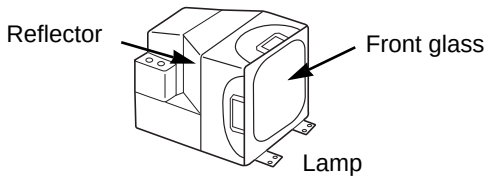
# 1. How to replace lamp

(Option lamp : Lamp unit DT00205)

**HIGH VOLTAGE**
**HIGH TEMPERATURE**
**HIGH PRESSURE**

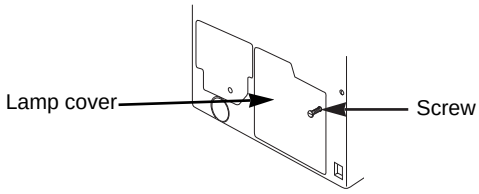
When replacing lamp, turn off and remove AC cord, wait 45 minutes to let lamp cool. High-pressure lamp when hot, may explode if improperly handled.

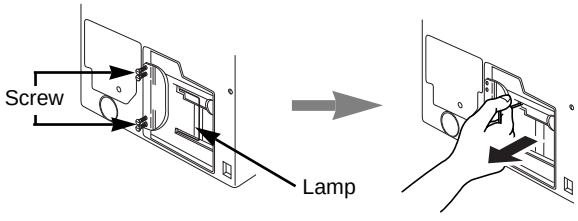
Caution
- For disposal of used lamp, treat according to the instruction of community authorities.
- Since the lamp is made of glass, do not apply shock to it and do not scratch it.
- Also, do not use old lamp. This could also cause explosion of the lamp.
- If it is probable that the lamp has exploded (explosive sound is heard), disconnect the power plug from the power outlet and replace lamp. The lamp is covered by front glass and air-tight structure, but, in rare cases, the reflector and the inside of the projector may be damaged by scattered broken pieces of glass, and broken pieces could cause injury when being handled.



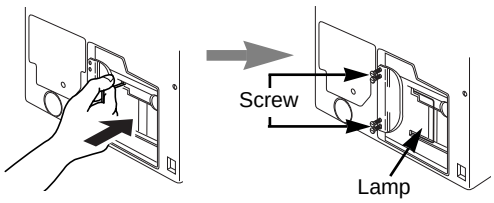

1. Turn the main power switch off and disconnect the power plug from the power outlet.
2. Remove the lamp cover.
   - If lamp is hot at this time, this could cause burn. Wait for minimum 45 minutes until lamp is cooled down.
   - Loosen a screw and remove the cover.
3. Loosen two screws and pull the handle to remove the lamp.
   - If the screws are not loosened completely, your fingers may be damaged.
   - Do not insert your hand into the box after the lamp is removed.

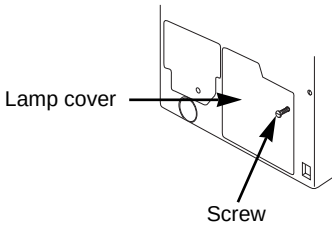
   (There are optical parts inside. If touched by hand, it may result in color unevenness, etc.)



4. Replace the lamp with new one and fix it using the same two screws.
   - Firmly tighten the lamp screws. Loose screws may cause bad connection of the connector which in turn may result in malfunctioning.
5. Install the lamp cover and fix it using screws.
   - To prevent burn, install the lamp cover and secure it using the screws.
   - Do not turn on the power with lamp cover removed.




- Whenever the lamp is replaced, reset the total operation time of the lamp. Do not reset if the lamp has not been replaced.
- Do not perform resetting without changing the lamp, as this can cause lamp breakage.

# *7. Dust Cleaning*

(1) Check dust condition

1. Show the white picture on the screen (whose size is 60") to check dust condition.
2. If dust condition is not good, should be clean the LCD module ass'y, the Multilenses and the Air filter.

(2) Clean the LCD module ass'y (Don't remove the LCD ass'y)

1. Blow the air on the LCD module by Dust blower. (See Fig.1)
2. If dusts are still on, wipe it with the special glass cleaning cloth.
3. Check dust condition.

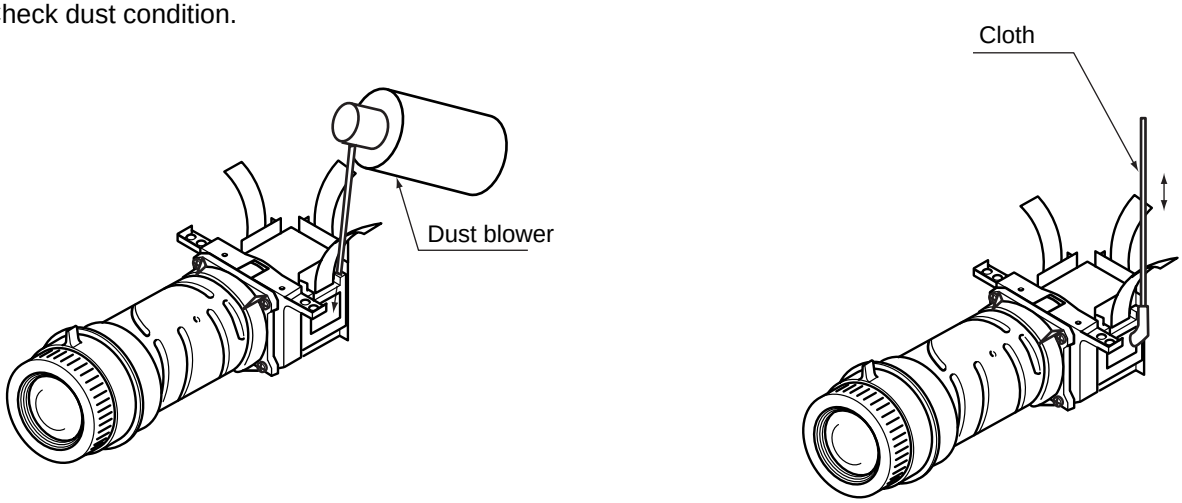
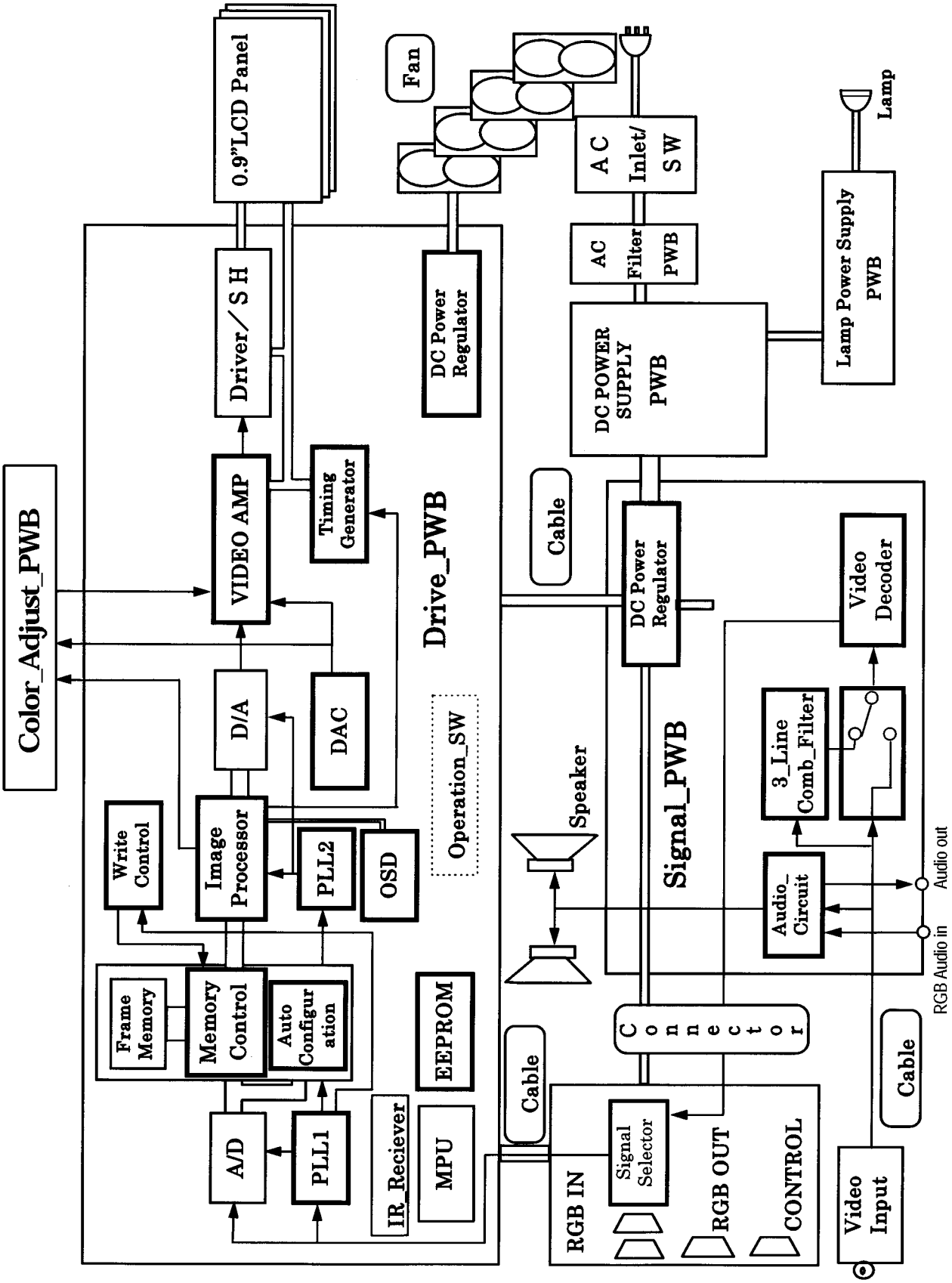



Fig. 1

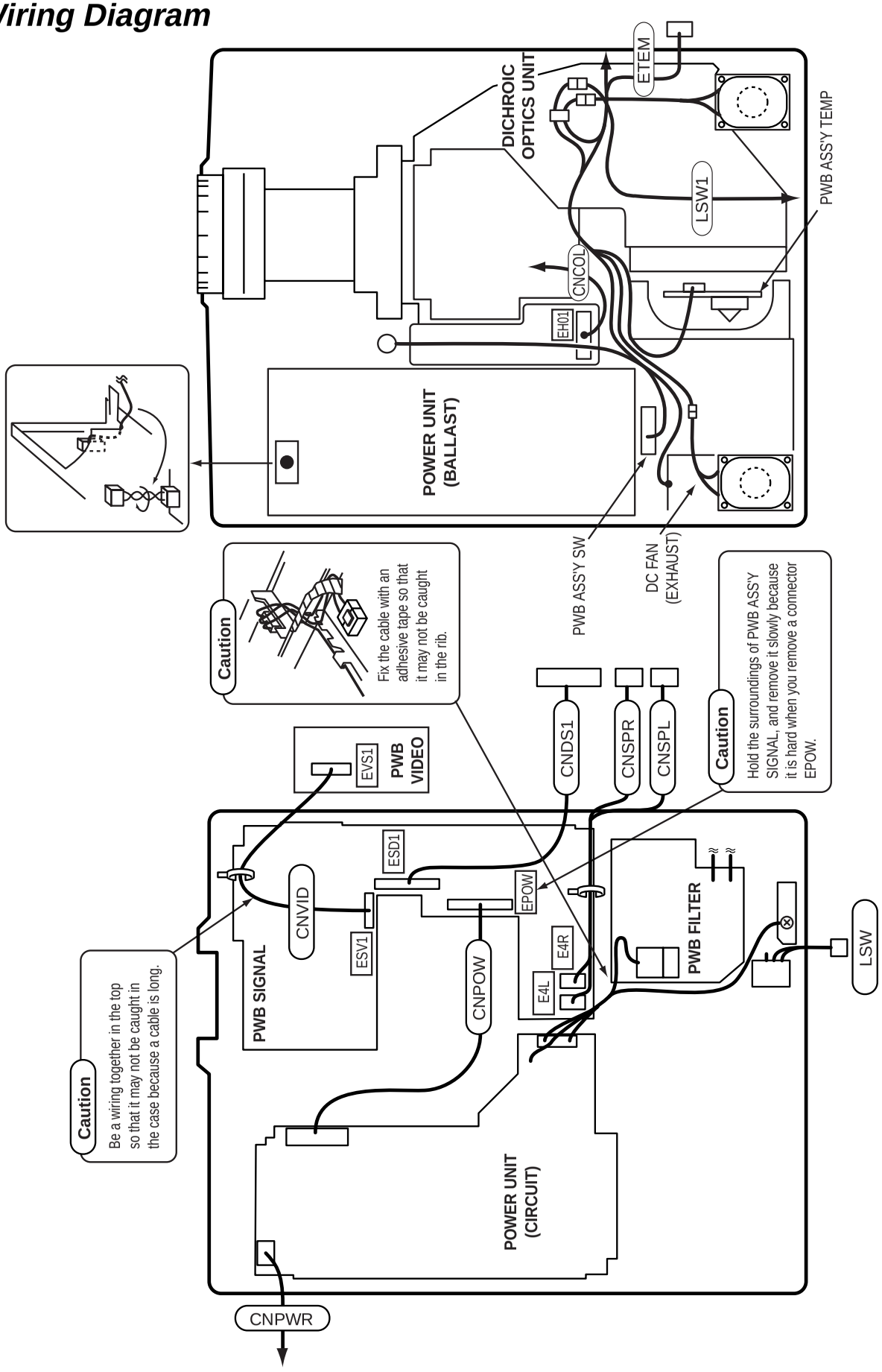
(3) Clean the Air filter

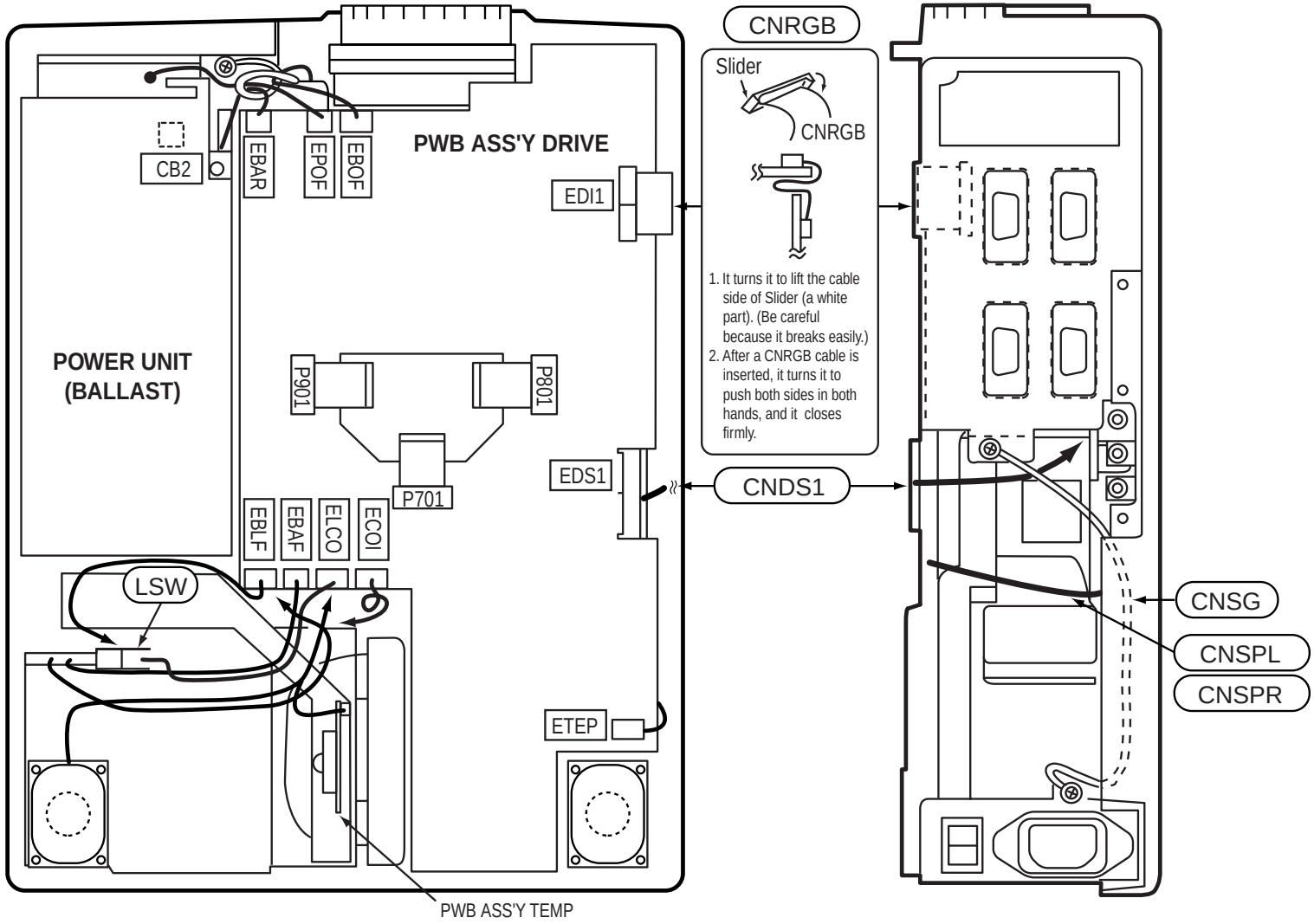
1. Remove the air filter from the front of the projector.
2. Wipe the air filter with a cloth moistened with water or neutral detergent, and wipe with a dry cloth.

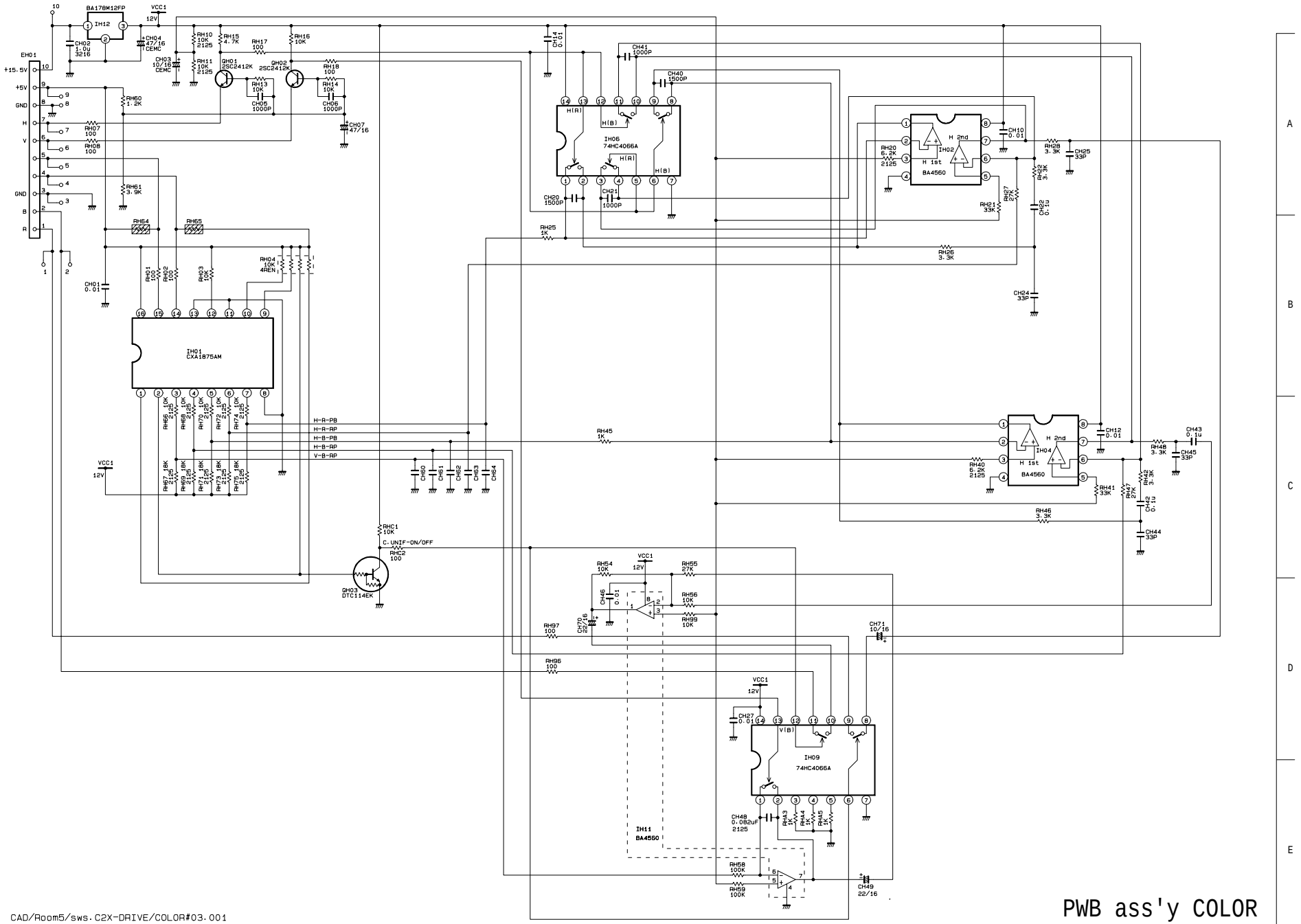
## 8. Block Diagram

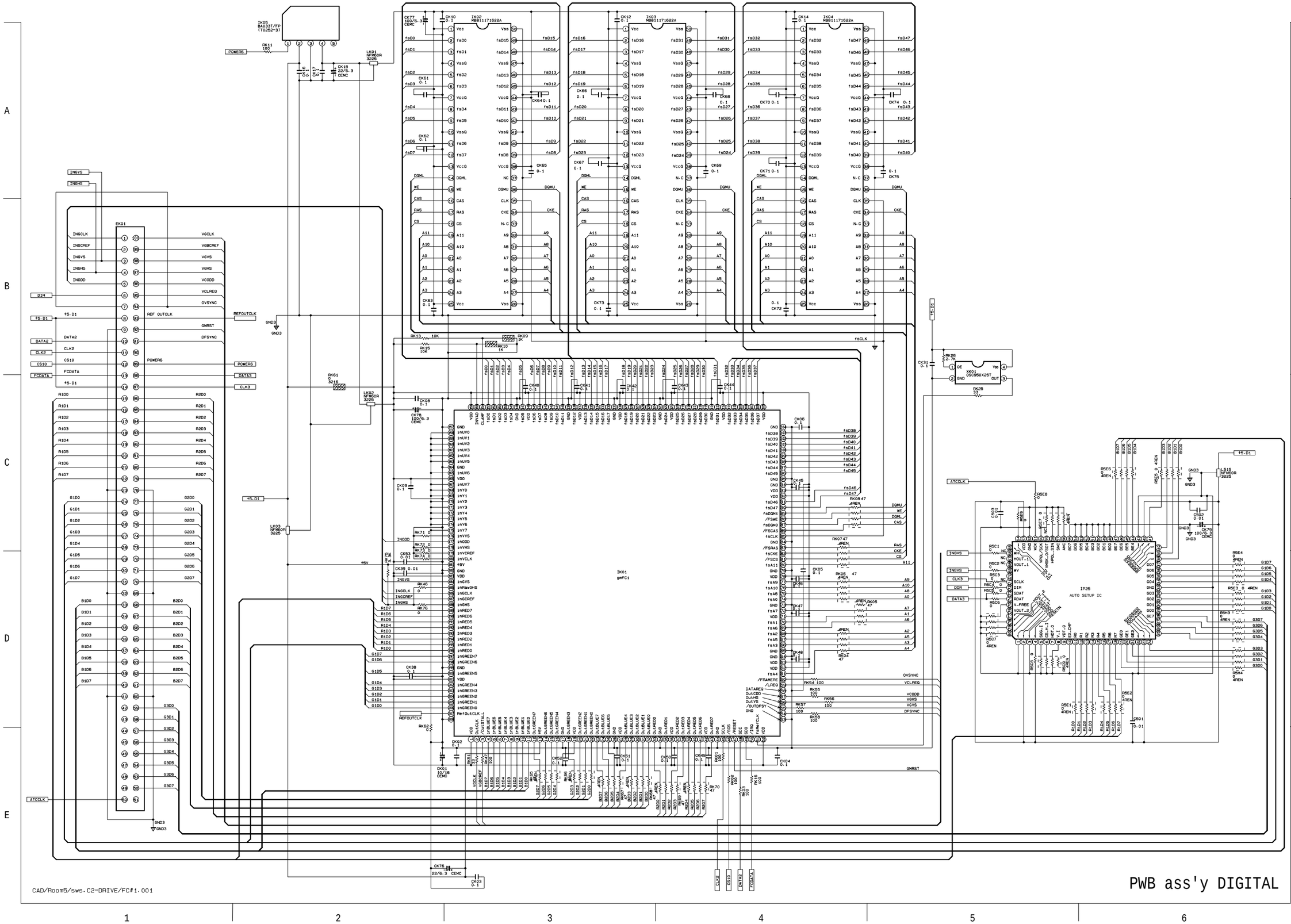


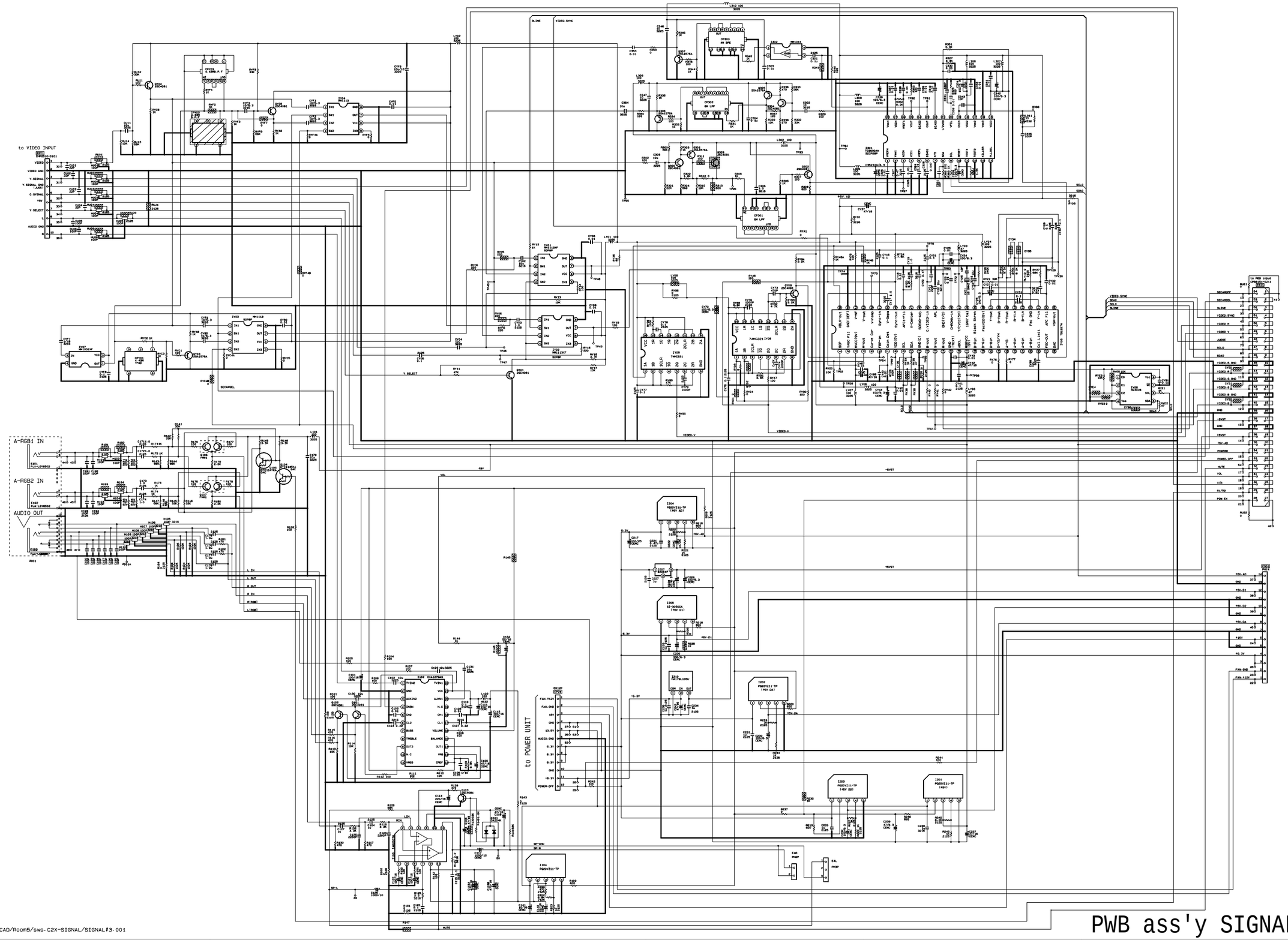
# 9. Wiring Diagram

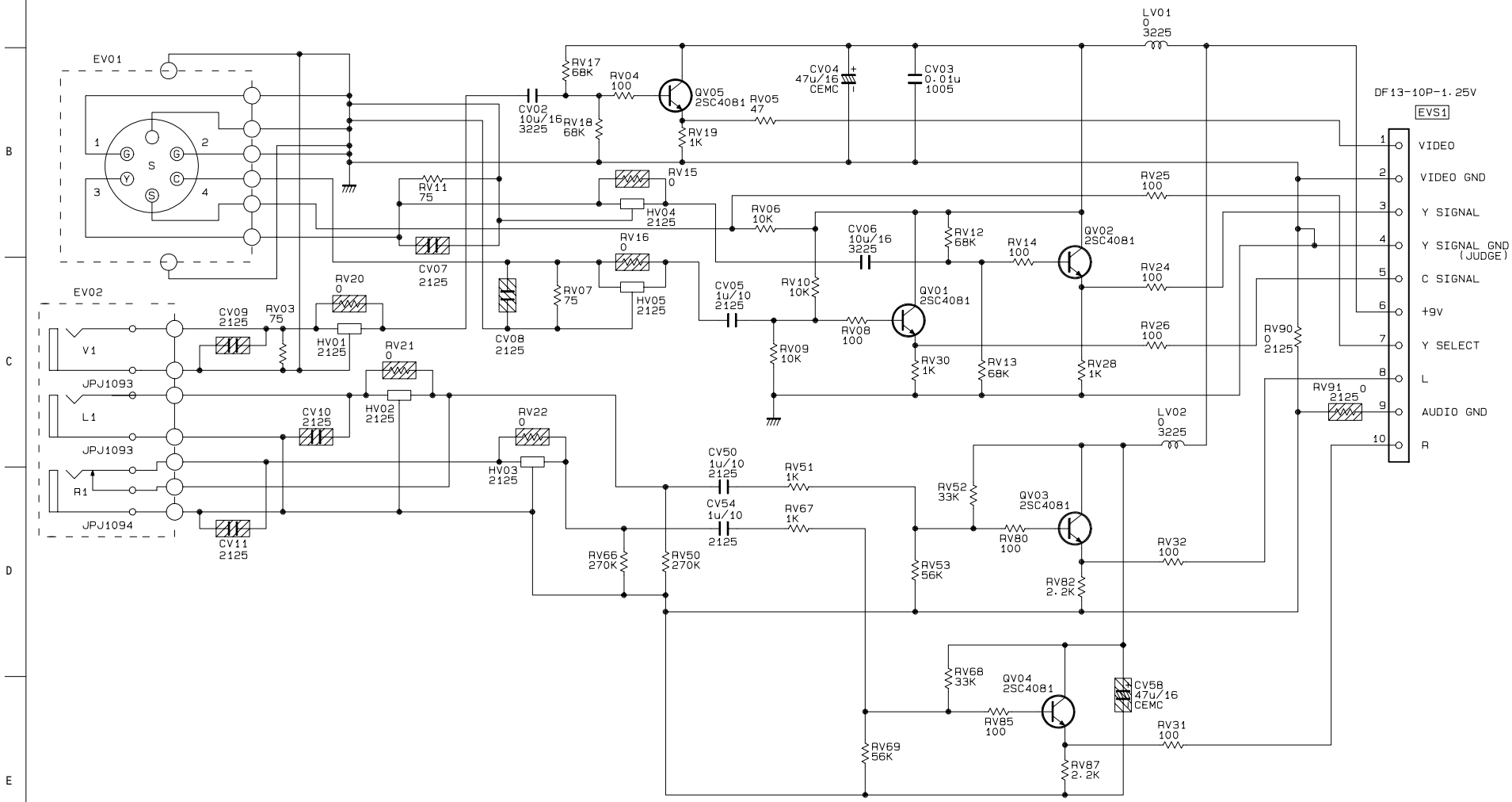



CNRGB
Slider
CNRGB
1. It turns it to lift the cable side of Slider (a white part). (Be careful because it breaks easily.)
2. After a CNRGB cable is inserted, it turns it to push both sides in both hands, and it closes firmly.
PWB ASS'Y DRIVE
CB2
EBAR
EPOF
EBOF
EDI1
POWER UNIT
(BALLAST)
P901
P801
P701
EDS1
CNDS1
EBLF
EBAF
ELCO
ECOI
LSW
ETEP
CNSG
CNSPL
CNSPR
PWB ASS'Y TEMP


PWB ass'y COLOR
CAD/Room5/sws.C2X-DRIVE/COLOR#03.001
IH01 CXA1875AM
IH02 BA4560
IH04 BA4560
IH06 74HC4066A
IH09 74HC4066A
IH11 BA4550
IH12 BA178M12FP
H-R-PB
H-R-RP
H-B-PB
H-B-RP
V-B-RP
C.UNIF-ON/OFF
+15.5V
+5V
GND
H
V
B
R
VCC1 12V

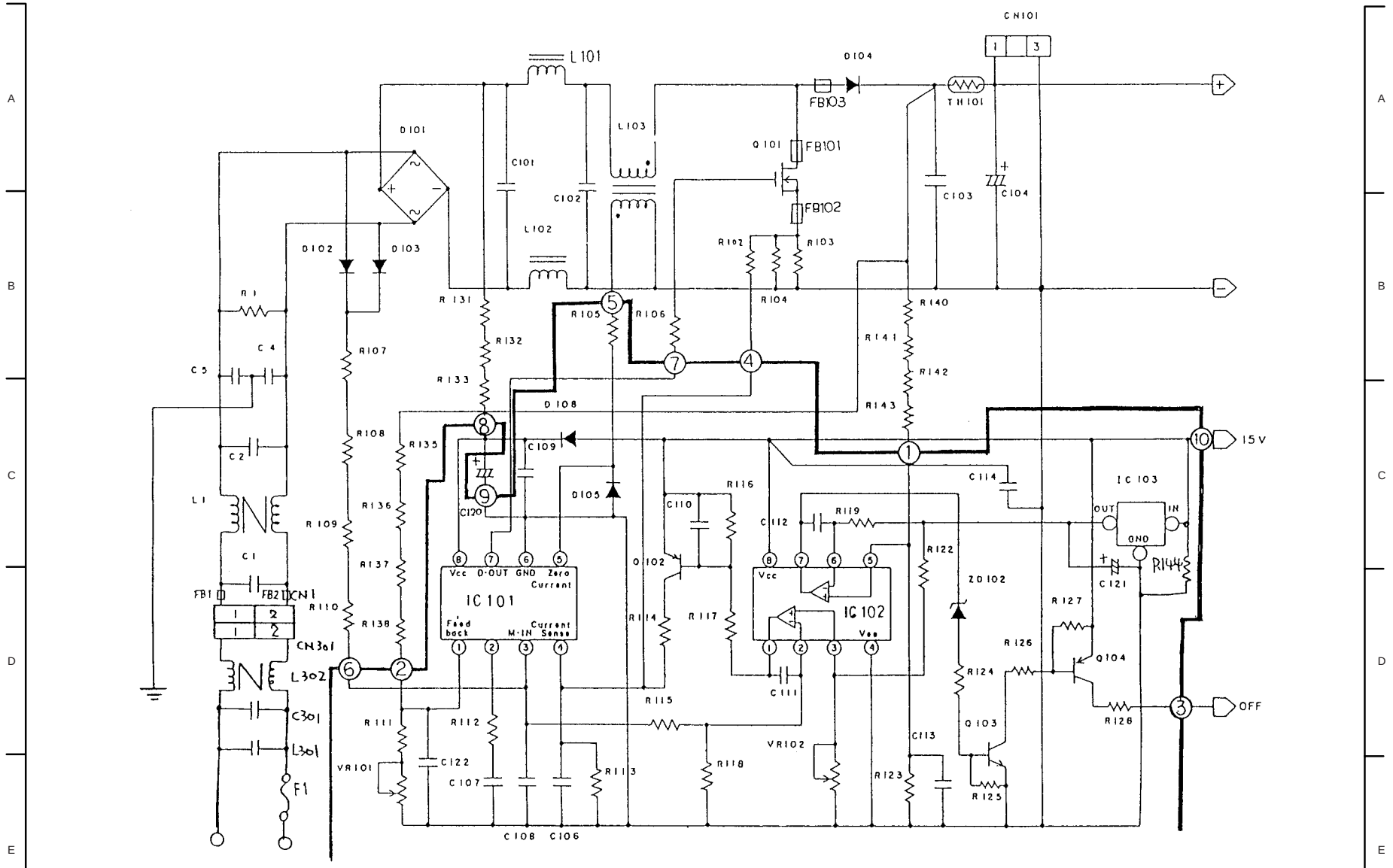

IK05 BA033T/FP (T0252-3)
POWER6
RK11 100
LK01 NFM60R 3225
CK17 0.1
CK18 22/6.3 CEMC
IK02 MB811171622A
IK03 MB811171622A
IK04 MB811171622A
CK77 100/6.3 CEMC
CK10 0.1
CK12 0.1
CK14 0.1
fsD0 fsD1 fsD2 fsD3 fsD4 fsD5 fsD6 fsD7
fsD8 fsD9 fsD10 fsD11 fsD12 fsD13 fsD14 fsD15
fsD16 fsD17 fsD18 fsD19 fsD20 fsD21 fsD22 fsD23
fsD24 fsD25 fsD26 fsD27 fsD28 fsD29 fsD30 fsD31
fsD32 fsD33 fsD34 fsD35 fsD36 fsD37 fsD38 fsD39
fsD40 fsD41 fsD42 fsD43 fsD44 fsD45 fsD46 fsD47
CK61 0.1
CK62 0.1
CK63 0.1
CK64 0.1
CK65 0.1
CK66 0.1
CK67 0.1
CK68 0.1
CK69 0.1
CK70 0.1
CK71 0.1
CK72 0.1
CK73 0.1
CK74 0.1
CK75 0.1
DQML WE CAS RAS CS A11 A10 A0 A1 A2 A3 Vcc Vss
DQMU CLK CKE N.C A9 A8 A7 A6 A5 A4 VccQ VssQ Vcc
INGVS
INGHS
INGCLK
INGCREF
INODD
VGCLK
VGBCREF
VGVS
VGHS
VCODD
VCLREQ
OVSYNC
DIR
+5.D1
REF OUTCLK
REFOUTCLK
GMRST
DFSYNC
DATA2
CLK2
CS10
POWER6
FCDATA
DATA3
CLK3
EK01
GND3
RK13 10K
RK15 10K
RK09 1K
RK10 1K
fsCLK
RK61 0 3216
LK02 NFM60R 3225
CK08 0.1
CK78 100/6.3 CEMC
CK40 0.1
CK41 0.1
CK42 0.1
CK43 0.1
CK44 0.1
CK06 0.1
CK09 0.1
LK03 NFM60R 3225
RK71 0
RK72 0
RK73 0
CK53 0.01
CK39 0.01
RK46 0
RK76 0
INGVS
INGCLK
INGCREF
INGHS
INODD
+5V
IK01 gmFC1
CK38 0.1
REFOUTCLK
RK62 0
CK02 0.1
CK01 10/16 CEMC
CK52 0.1
CK51 0.1
CK50 0.1
CK49 0.1
CK04 0.1
RK60 100
RK58 100
RK59 100
RK16 100
RK51 100
RK66 4REN
RK67 4REN
RK68 4REN
RK69 4REN
RK70 47
CK76 22/6.3 CEMC
CK03 0.1
CLK2
CS10
DATA2
FCDATA
ATCCLK
GMRST
DGMU WE DQM CAS RAS CKE CS A11 A9 A10 A8 A0 A7 A1 A6 A2 A5 A3 A4
RK0647 4REN
RK05 47 4REN
RK04 47
RK47
RK48
RK46
RK45
RK44 100
RK55 100
RK56 100
RK57 100
RK58 100
OVSYNC VCLREQ VCODD VGHS VGVS DFSYNC
DATAREQ OutCOD OutHS OutYS /OUTDFSY GND
/FRAMEREQ /LREQ
CK31 0.1
RK26 2.7K
XK01 OSC950X25T
RK25 33
IP25 AUTO SETUP IC
ATCCLK
INGHS
INGVS
CLK3
DIR
DATA3
RSC1 0
RSC2 0
RSC3 0
RSC4 0
RSC5 0
RSC6 0
RSC7 0 4REN
RSE6 0 4REN
RSE5 0 4REN
RSE4 4REN
RSE3 0 4REN
RSE2 4REN
RSE1 0 4REN
RSH3 4REN
RSH4 4REN
G307 G306 G305 G304 G303 G302 G301 G300
G1D7 G1D6 G1D5 G1D4 G1D3 G1D2 G1D1 G1D0
R1D7 R1D6 R1D5 R1D4 R1D3 R1D2 R1D1 R1D0
CK79 100/6.3 CEMC
CK80 0.01
CK81 0.1
CK82 0.1
CK83 0.1
CK501 0.01
L515 NFM60R 3225
GND3
+5.D1
PWB ass'y DIGITAL
CAD/Room5/sws.C2-DRIVE/FC#1.001


to VIDEO INPUT
A-RGB1 IN
A-RGB2 IN
AUDIO OUT
to POWER UNIT
to RGB input
PWB ass'y SIGNAL
CAD/Room5/sws.C2X-SIGNAL/SIGNAL#3.001

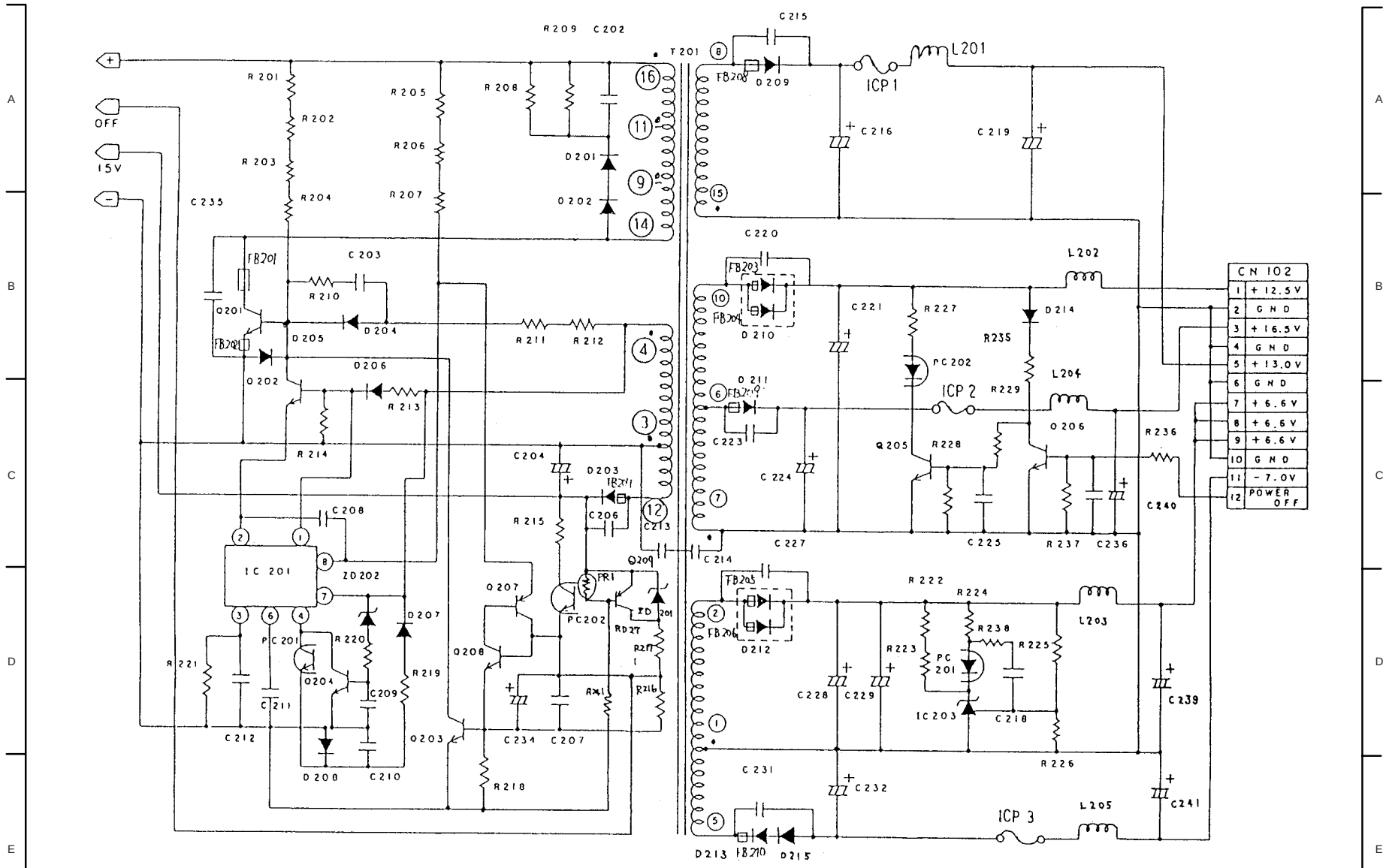



CAD/Room5/sws.C2X-SIGNAL/VIDEO#3.001

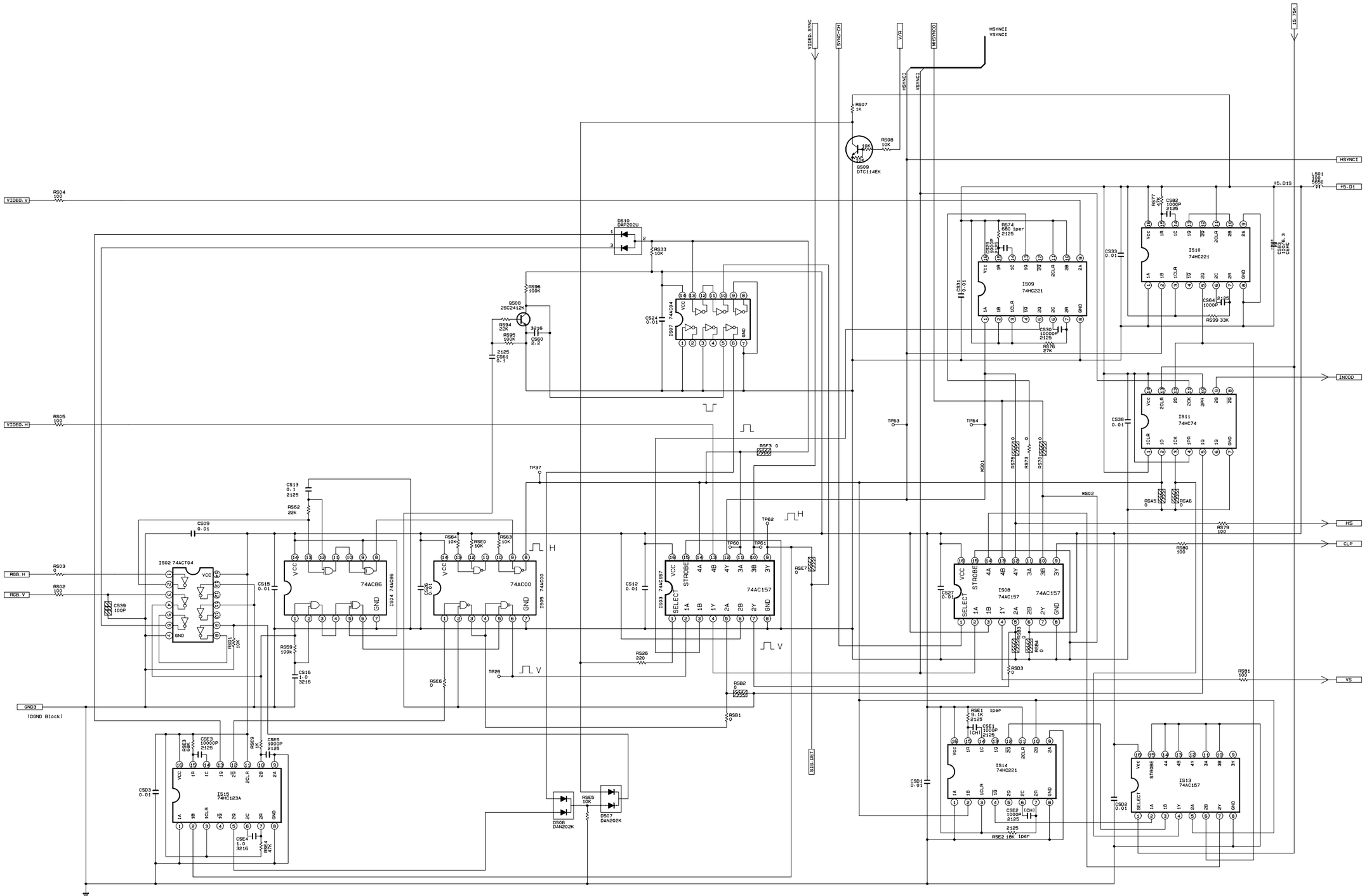
# PWB ass'y VIDEO




# POWER UNIT (CIRCUIT) 1/2

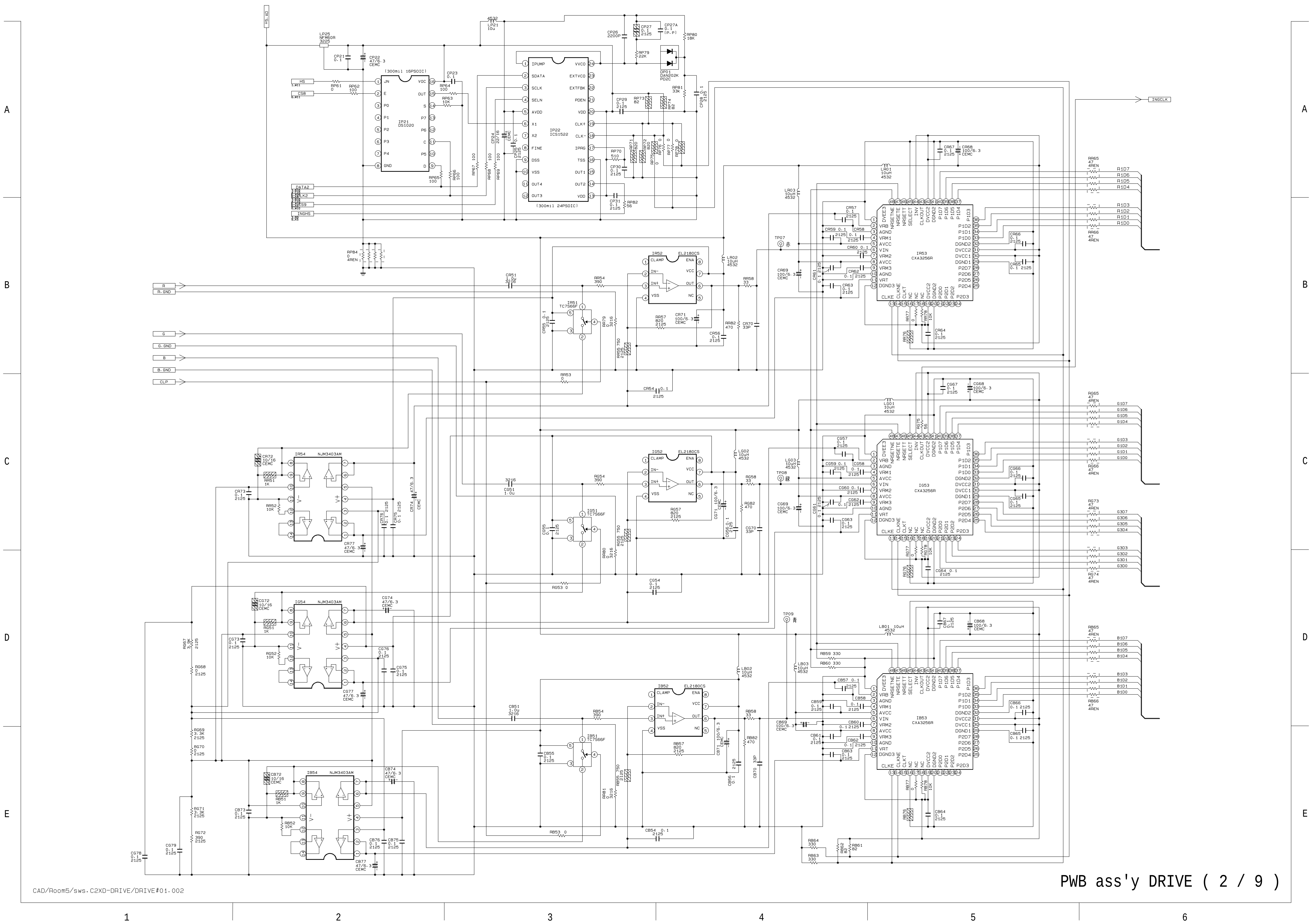



# POWER UNIT (CIRCUIT) 2/2




PWB ass'y DRIVE ( 1 / 9 )

CAD/Room5/sws.C2XD-DRIVE/DRIVE#01

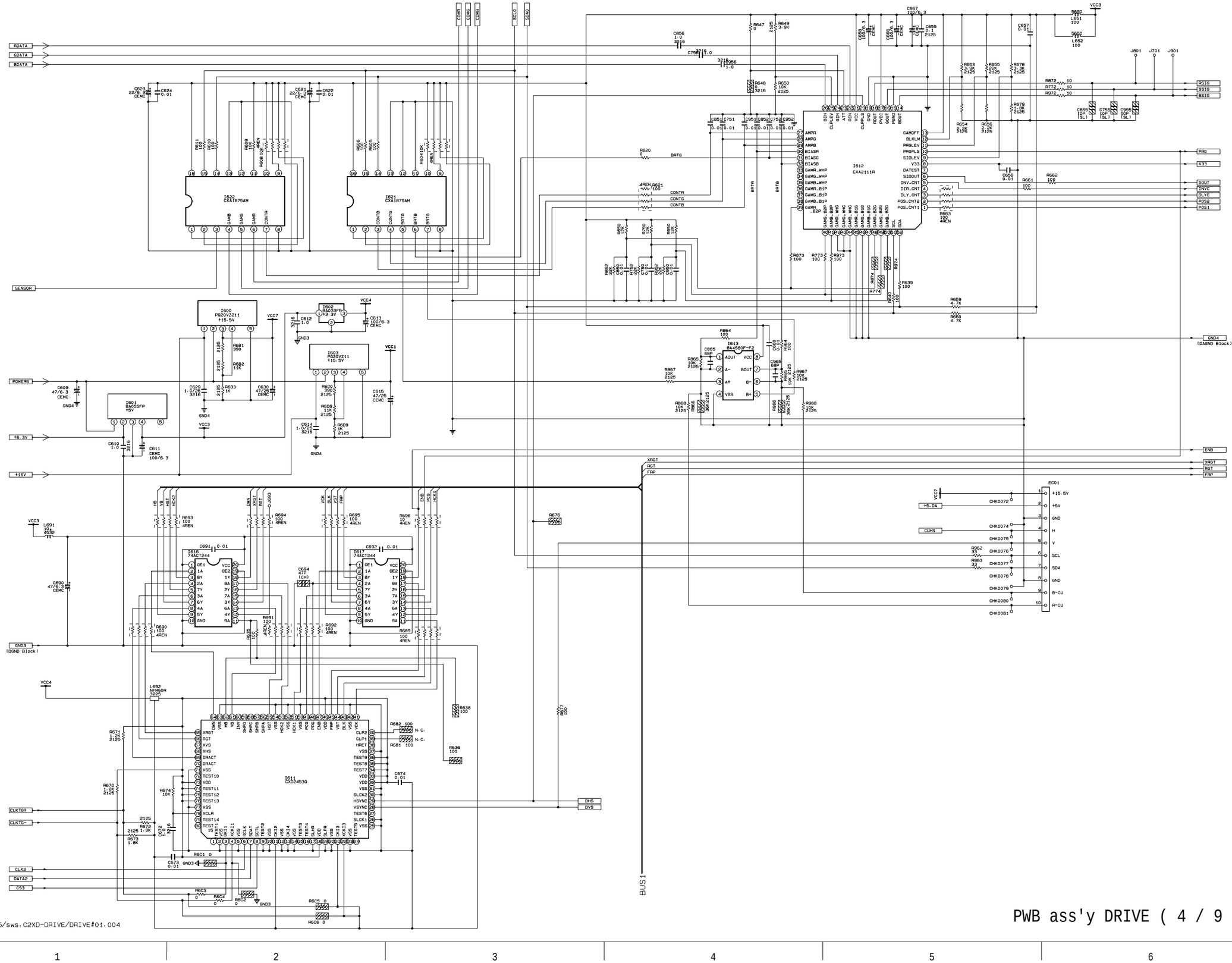

+5.AD
LP25 NFM60R 3225
CP21 0.1
CP22 47/6.3 CEMC
(300mil 16PSOIC)
IP21 DS1020
HS
CS8
DATA2
CLK2
CS9
INGHS
RP84 0 4REN
IP22 ICS1522
(300mil 24PSOIC)
LP21 10u 4532
DP01 DAN202K PD2C
INGCLK
R
R.GND
G
G.GND
B
B.GND
CLP
IR52 EL2180CS
IR51 TC7S66F
IR53 CXA3256R
IR54 NJM3403AM
IG52 EL2180CS
IG51 TC7S66F
IG53 CXA3256R
IG54 NJM3403AM
IB52 EL2180CS
IB51 TC7S66F
IB53 CXA3256R
IB54 NJM3403AM
TP07 赤
TP08 緑
TP09 青
R1D7
R1D6
R1D5
R1D4
R1D3
R1D2
R1D1
R1D0
G1D7
G1D6
G1D5
G1D4
G1D3
G1D2
G1D1
G1D0
G3D7
G3D6
G3D5
G3D4
G3D3
G3D2
G3D1
G3D0
B1D7
B1D6
B1D5
B1D4
B1D3
B1D2
B1D1
B1D0

CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.002

PWB ass'y DRIVE ( 2 / 9 )

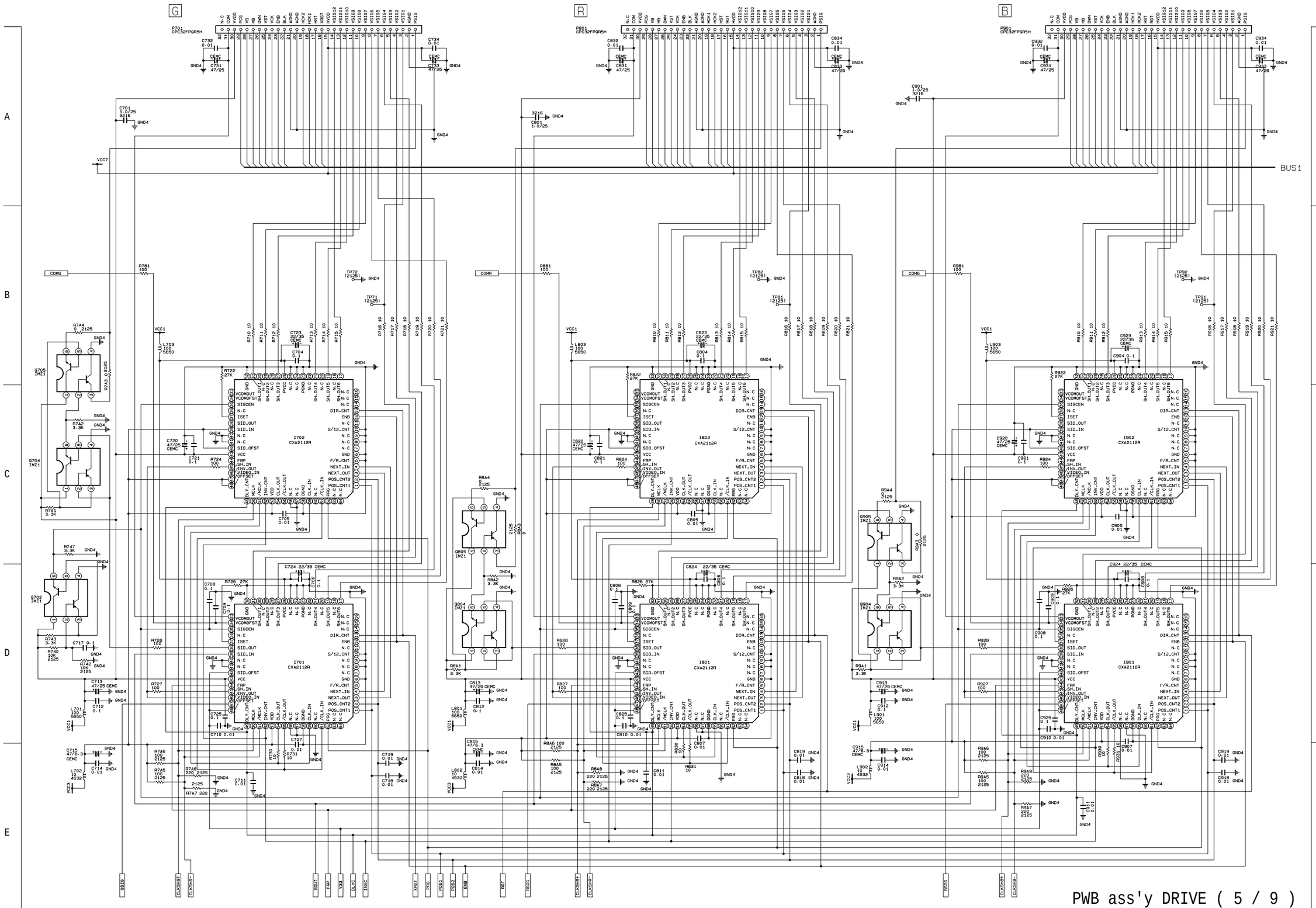
PWB ass'y DRIVE ( 3 / 9 )

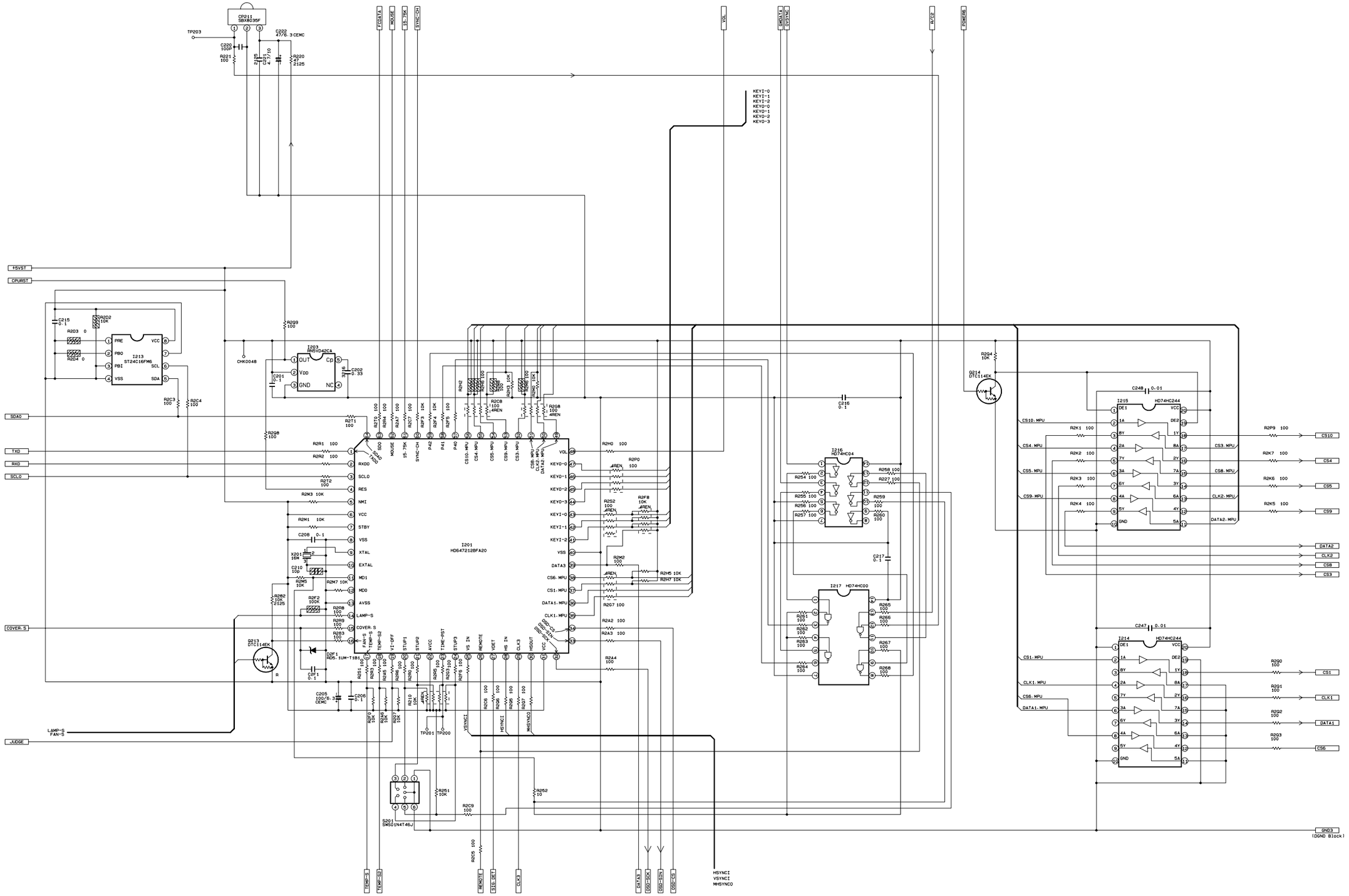
CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.003




PWB ass'y DRIVE ( 4 / 9 )

CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.004


G
R
B
P701 CPC32FPGR5H
P801 CPC32FPGR5H
P901 CPC32FPGR5H
BUS1
I702 CXA2112R
I802 CXA2112R
I902 CXA2112R
I701 CXA2112R
I801 CXA2112R
I901 CXA2112R
PWB ass'y DRIVE ( 5 / 9 )
CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.005




CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.006

# PWB ass'y DRIVE ( 6 / 9 )

EDI1
CL586-0529-2

CHK001 — R
CHK002
R.GND — RE50 3216 0 GND3
CHK004 — G
CHK003 — G.GND — RE51 3216 0 GND3
CHK006 — B
CHK005 — B.GND — RE52 3216 0 GND3
CHK007
CHK008
CHK009 — RGB.H
CHK010 — RGB.V
CHK011
CHK012 — VIDEO.H
CHK013 — VIDEO.V
CHK014 — VIDEO.SYNC
CHK015 — SECAM.SEL
CHK0016 — SECAM.OFF
CHK0017 — POW.EX
CHK0023 — POWER.OFF
CHK0018 — REMOTE
CHK0019 — MOUSE
CHK0020 — TXD
CHK0021 — RXD
CHK0022 — JUDGE
CHK0024 — SCL0
CHK0025 — SDA0
CHK0026
CHK0028 — MUTE
CHK0029 — VOL
CHK0027 — GND3
CHK0030 — JE01 (Reserve1)
CHK0031 — JE02 (Reserve2)
CHK0032 — JE03 (Reserve3)

CP210 SBX8035F
TP202
C239 100P
R230 47 2125
R232 100
C235 47 2125
C2A1 CEMC 47/6.3
R/C2
+5VST

POWER6
V/R
MUTE
MHSYNC0

R2E9
C238 0.1
R2E8 10 2125
R2E1 560
R2E4 560
R2E5 560
R2E6 560
R2E7 560
R2D8 560
R2D9 560
I211 NJU3713
P5 P6 P7 P8 VSS P9 P10 P11 P12
VDD P4 P3 P2 P1 CLR STB CLK DATA
C243 100P
C244 100P
C245 100P

R241 390 DC01 SML-210VT — TEMP
R242 390 DC02 SML-210VT — LAMP
R243 390 — POWER(GREEN)
R244 180 DC03 SDC-SML-020MVT — (RED)

R265 100
R266 100
R2H9 100
CS6
DATA1
CLK1
CPURST
R2H8 100
C2A4 0.01
GND3
(DGND Block)

RC07 D8 2125

KEY0-0 R245 100 — SC01 SKHMPU — CC01 100P — STANBY/ON
KEY0-1 R246 100 — SC02 SKHMPU — CC02 100P, CC03 100P — INPUT
KEY0-2 R247 100 — SC03 SKHMPU — CC04 100P, CC05 100P — MUTE
KEY0-3 R248 100 — SC04 SKHMPU — CC06 100P, CC07 100P — RESET
KEYI-0 R249 100 — D201 DAP202U — SC05 SKHMPU — CC08 100P, CC09 100P — MENU△
KEYI-1 R250 100 — D202 DAP202U — SC06 SKHMPU — CC10 100P, CC11 100P — MENU▽
KEYI-2 R2A0 100 — D203 DAP202U — SC07 SKHMPU — CC12 100P, CC13 100P — MENU◁
SC08 SKHMPU — CC14 100P, CC15 100P — MENU▷
RC08 D8 2125

KEY0-0
KEY0-1
KEY0-2
KEY0-3
KEYI-0
KEYI-1
KEYI-2

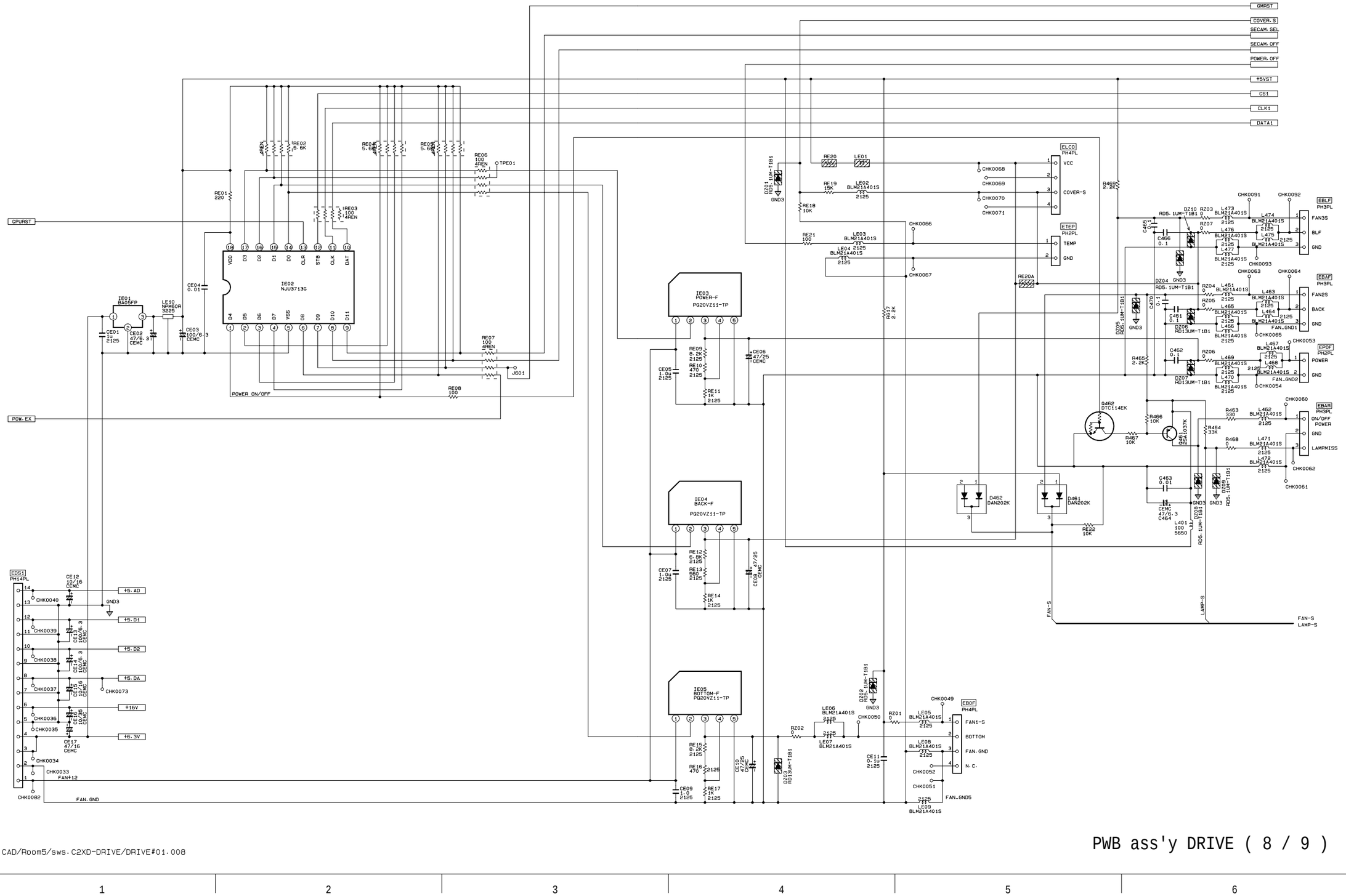
LW01 10uH
VCC3

TEMP-S2
TEMP-S
SENSOR

EDT1
DF13-5P-1.25H
1 +5V — CHK0055
2 GND4 — CHK0056
3 TEMP-S2 — CHK0057
4 TEMP-S — CHK0058
5 SENSOR — CHK0059
HW02 2125
HW03 2125
HW04 2125

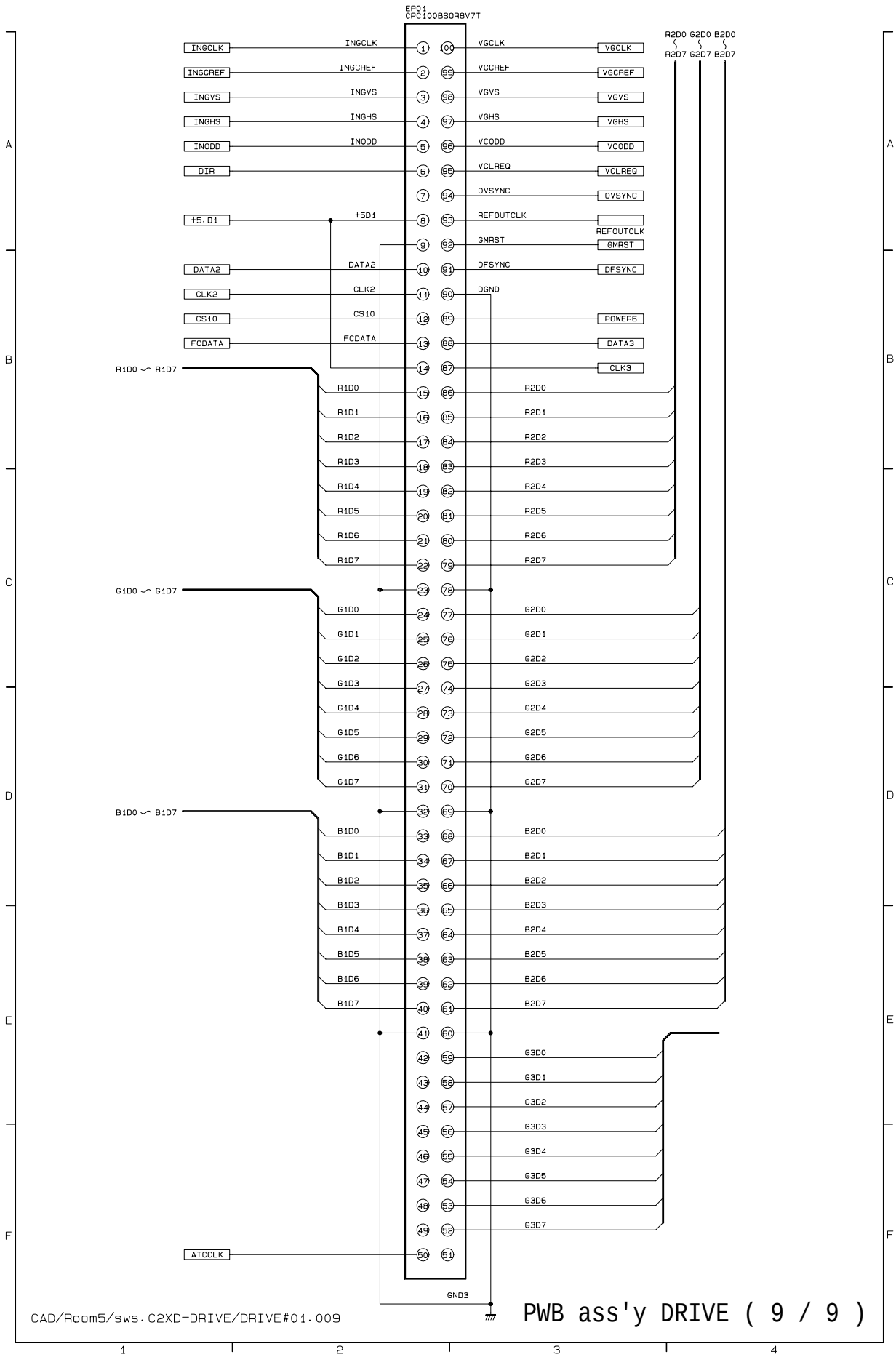
CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.007

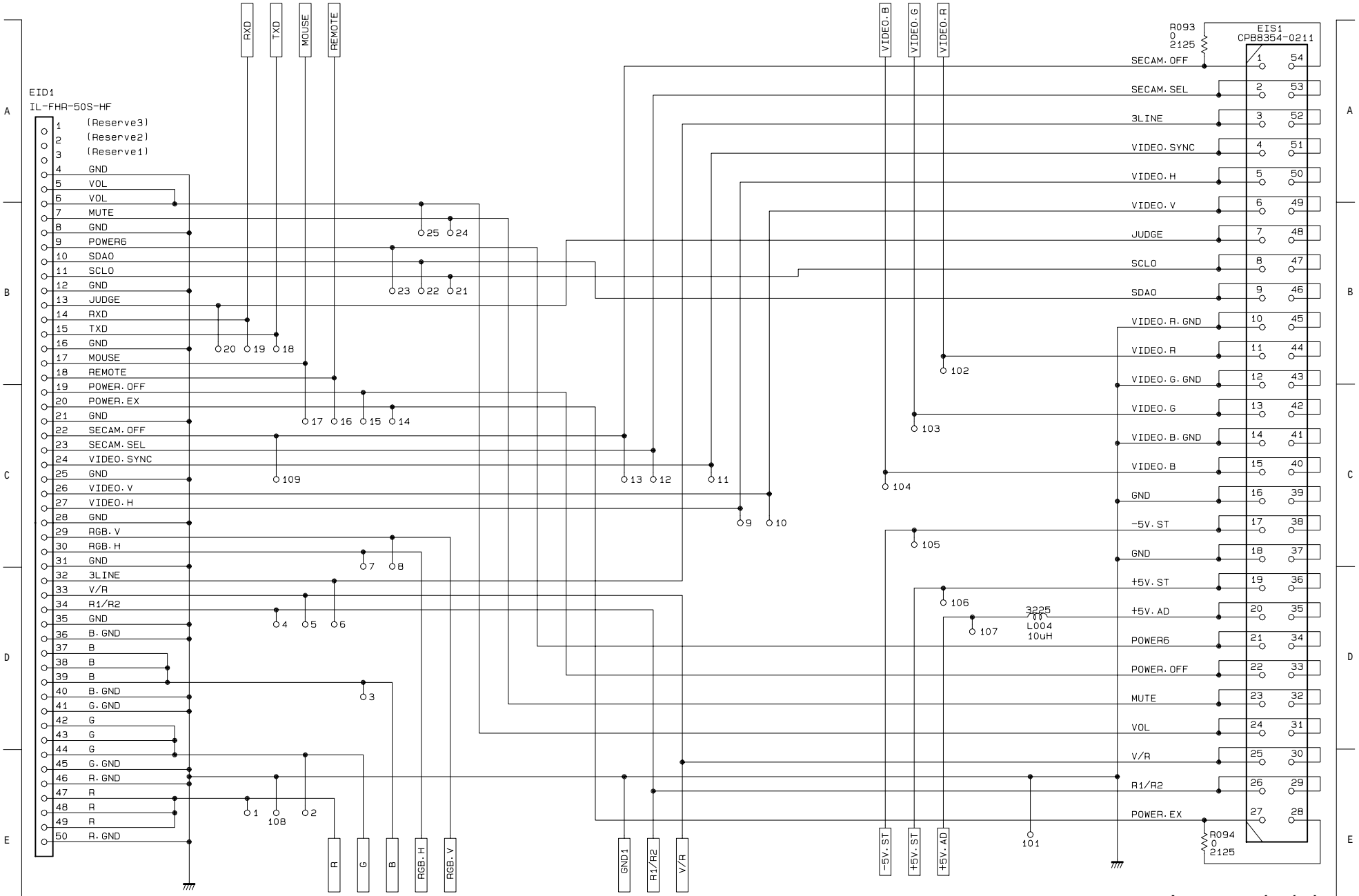
PWB ass'y DRIVE ( 7 / 9 )

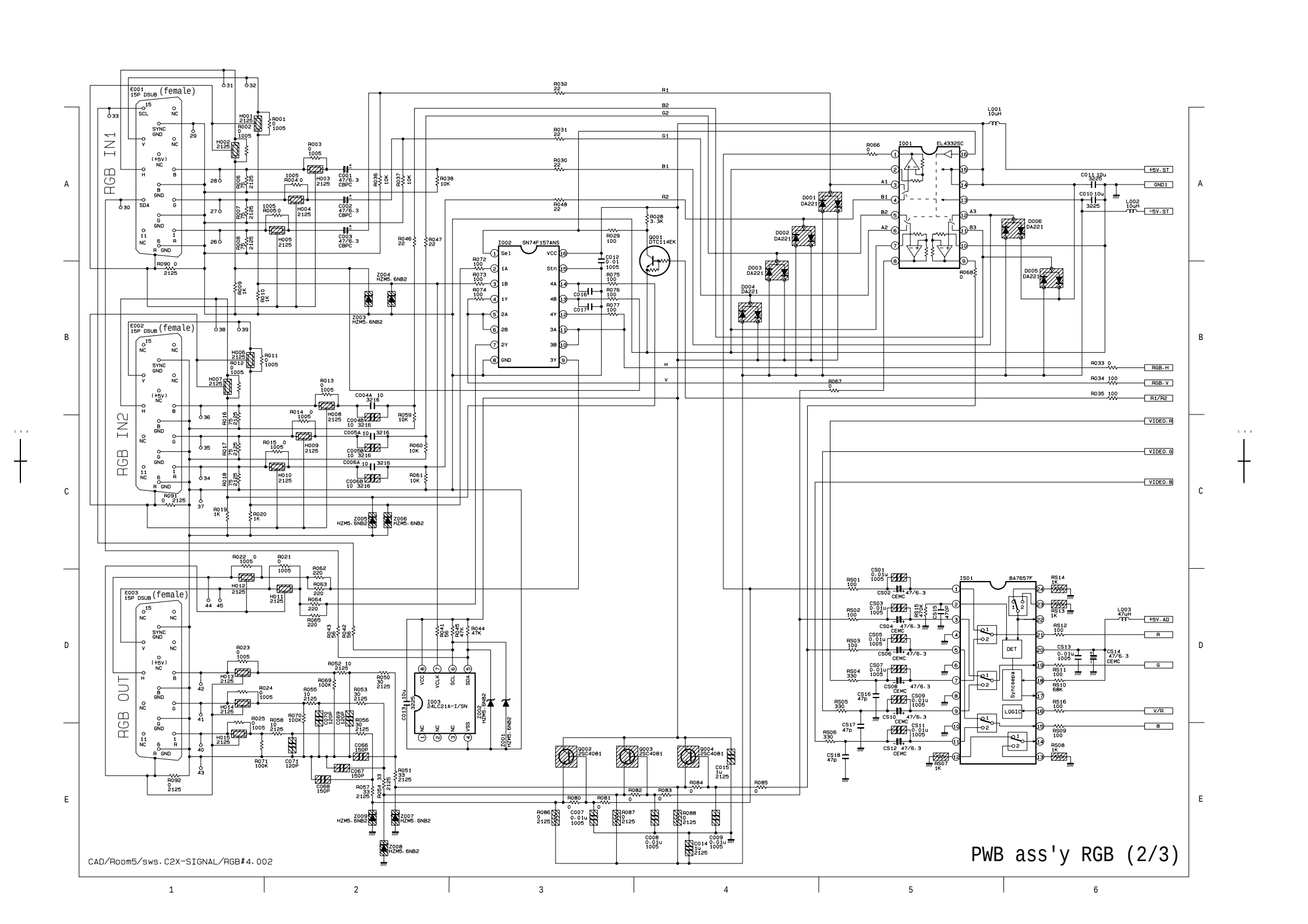


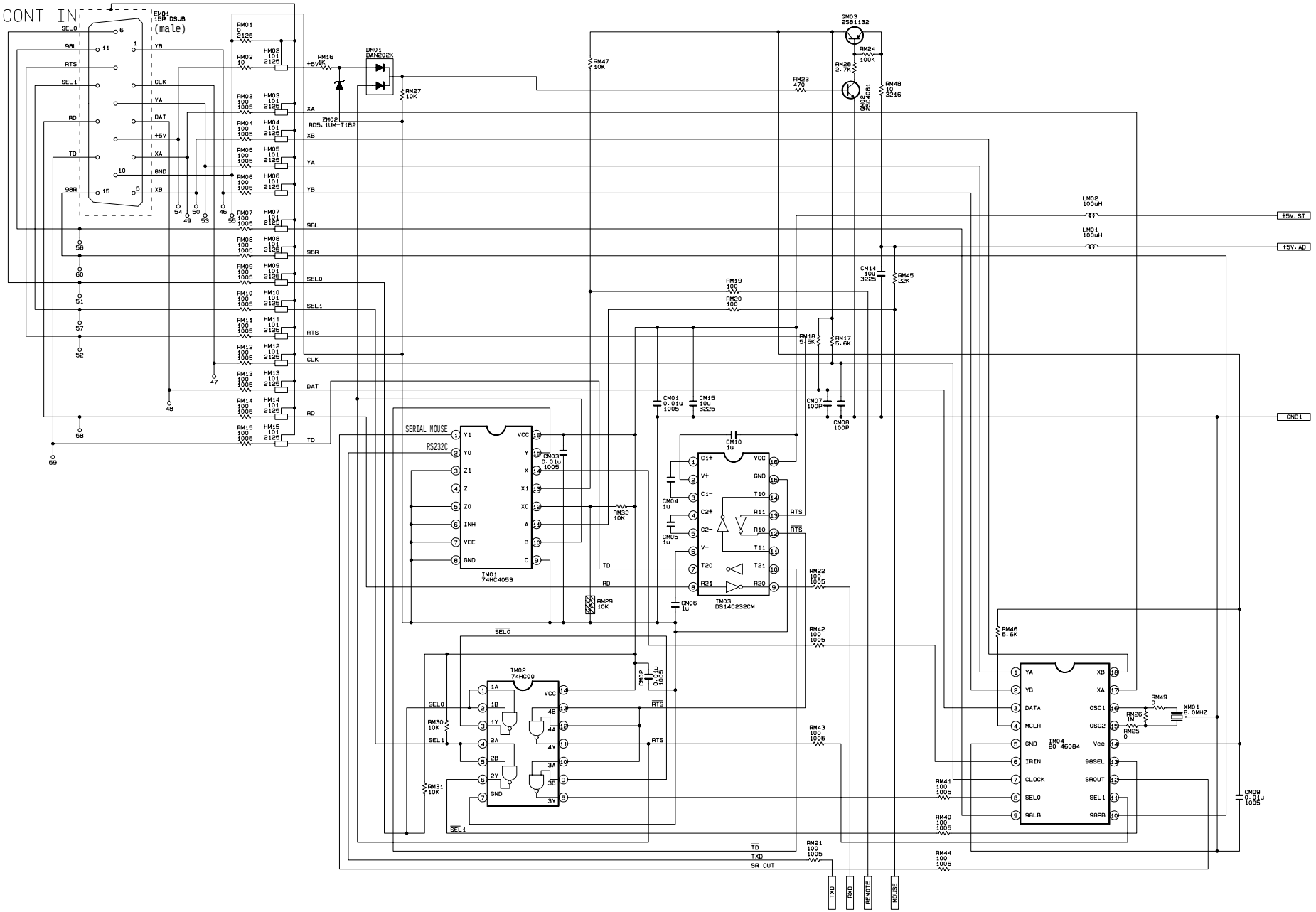

CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.008

PWB ass'y DRIVE ( 8 / 9 )


EP01
CPC100BSOR8V7T
INGCLK
INGCREF
INGVS
INGHS
INODD
DIR
+5.D1
DATA2
CLK2
CS10
FCDATA
R1D0 ~ R1D7
G1D0 ~ G1D7
B1D0 ~ B1D7
ATCCLK
VGCLK
VGCREF
VGVS
VGHS
VCODD
VCLREQ
OVSYNC
REFOUTCLK
GMRST
DFSYNC
DGND
POWER6
DATA3
CLK3
R2D0 G2D0 B2D0
R2D7 G2D7 B2D7
G3D0
G3D1
G3D2
G3D3
G3D4
G3D5
G3D6
G3D7
GND3
CAD/Room5/sws.C2XD-DRIVE/DRIVE#01.009
PWB ass'y DRIVE ( 9 / 9 )


EID1
IL-FHR-50S-HF
1 (Reserve3)
2 (Reserve2)
3 (Reserve1)
4 GND
5 VOL
6 VOL
7 MUTE
8 GND
9 POWER6
10 SDAO
11 SCLO
12 GND
13 JUDGE
14 RXD
15 TXD
16 GND
17 MOUSE
18 REMOTE
19 POWER.OFF
20 POWER.EX
21 GND
22 SECAM.OFF
23 SECAM.SEL
24 VIDEO.SYNC
25 GND
26 VIDEO.V
27 VIDEO.H
28 GND
29 RGB.V
30 RGB.H
31 GND
32 3LINE
33 V/R
34 R1/R2
35 GND
36 B.GND
37 B
38 B
39 B
40 B.GND
41 G.GND
42 G
43 G
44 G
45 G.GND
46 R.GND
47 R
48 R
49 R
50 R.GND
RXD
TXD
MOUSE
REMOTE
VIDEO.B
VIDEO.G
VIDEO.R
R093
0
2125
EIS1
CPB8354-0211
SECAM.OFF
SECAM.SEL
3LINE
VIDEO.SYNC
VIDEO.H
VIDEO.V
JUDGE
SCLO
SDAO
VIDEO.R.GND
VIDEO.R
VIDEO.G.GND
VIDEO.G
VIDEO.B.GND
VIDEO.B
GND
-5V.ST
GND
+5V.ST
+5V.AD
POWER6
POWER.OFF
MUTE
VOL
V/R
R1/R2
POWER.EX
R094
0
2125
L004
10uH
3225
R
G
B
RGB.H
RGB.V
GND1
R1/R2
V/R
-5V.ST
+5V.ST
+5V.AD
CAD/Room5/sws.C2X-SIGNAL/RGB#4.001
PWB ass'y RGB (1/3)

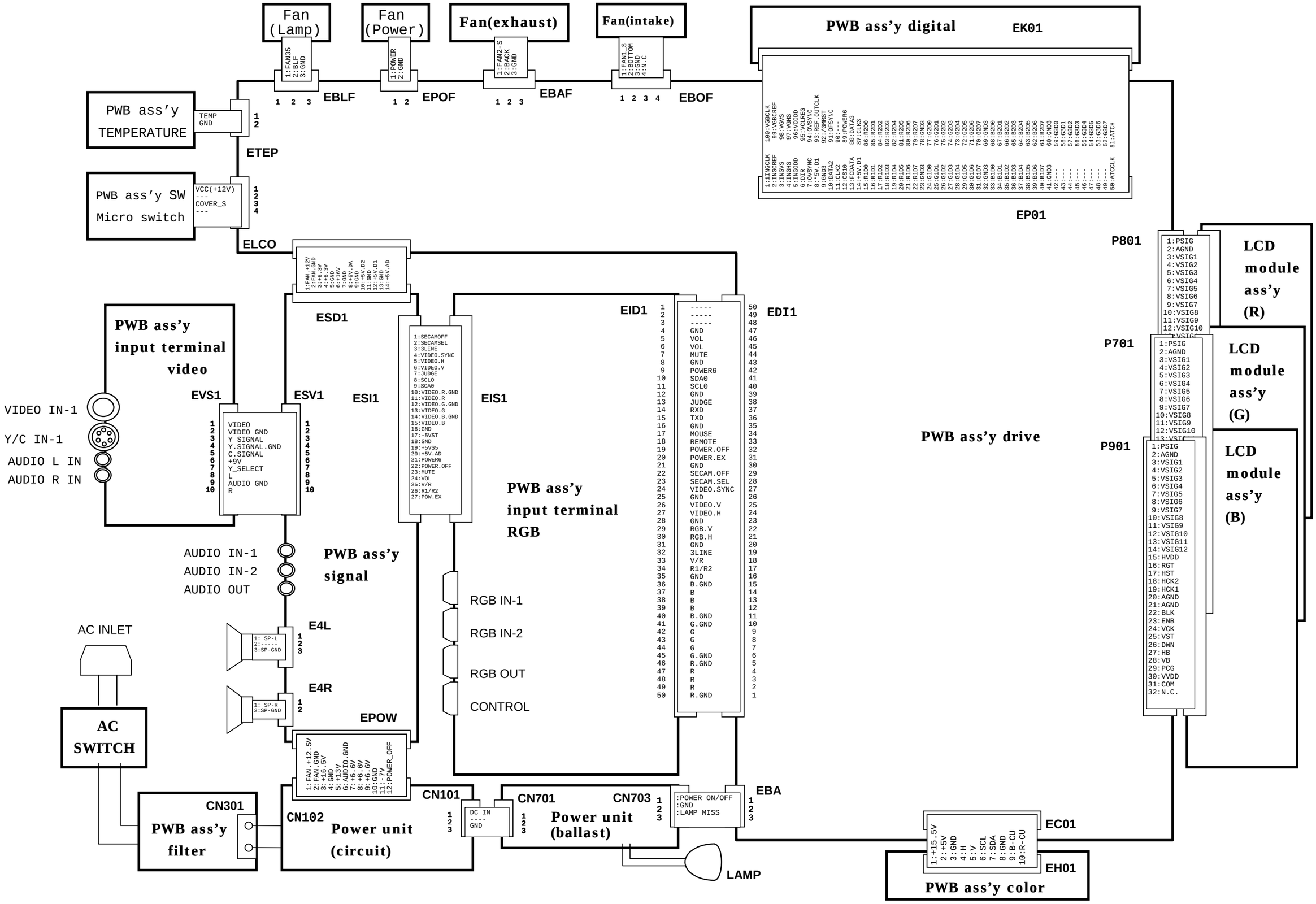

RGB IN1
RGB IN2
RGB OUT
E001 15P DSUB (female)
E002 15P DSUB (female)
E003 15P DSUB (female)
I001 EL4332SC
I002 SN74F157ANS
I003 24LC21A-I/SN
IS01 BA7657F
Q001 DTC114EK
Q002 2SC4081
Q003 2SC4081
Q004 2SC4081
+5V.ST
GND1
-5V.ST
RGB.H
RGB.V
R1/R2
VIDEO.R
VIDEO.G
VIDEO.B
+5V.AD
R
G
V/R
B
CAD/Room5/sws.C2X-SIGNAL/RGB#4.002
PWB ass'y RGB (2/3)



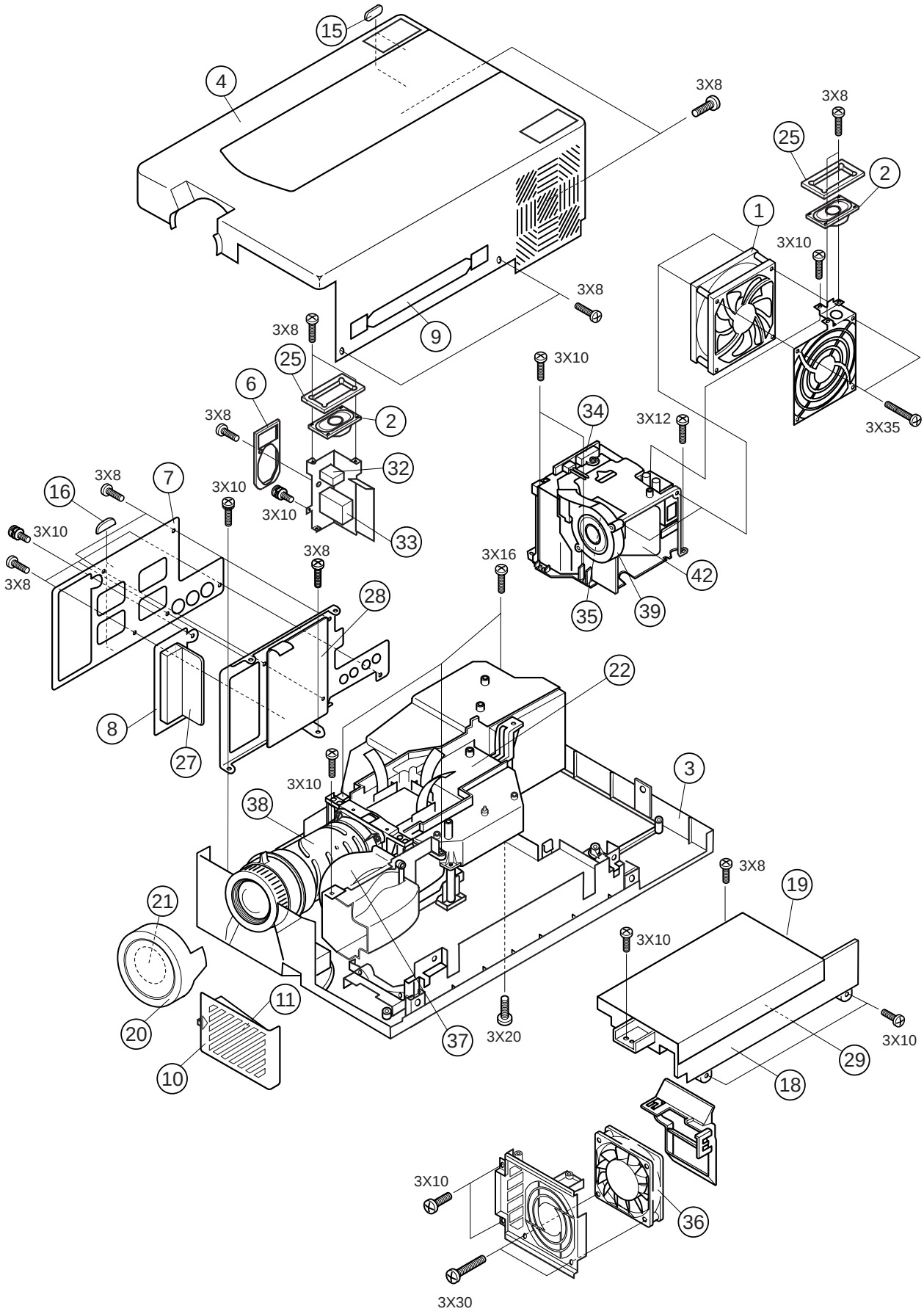

CAD/Room5/sws.C2X-SIGNAL/RGB#4.003

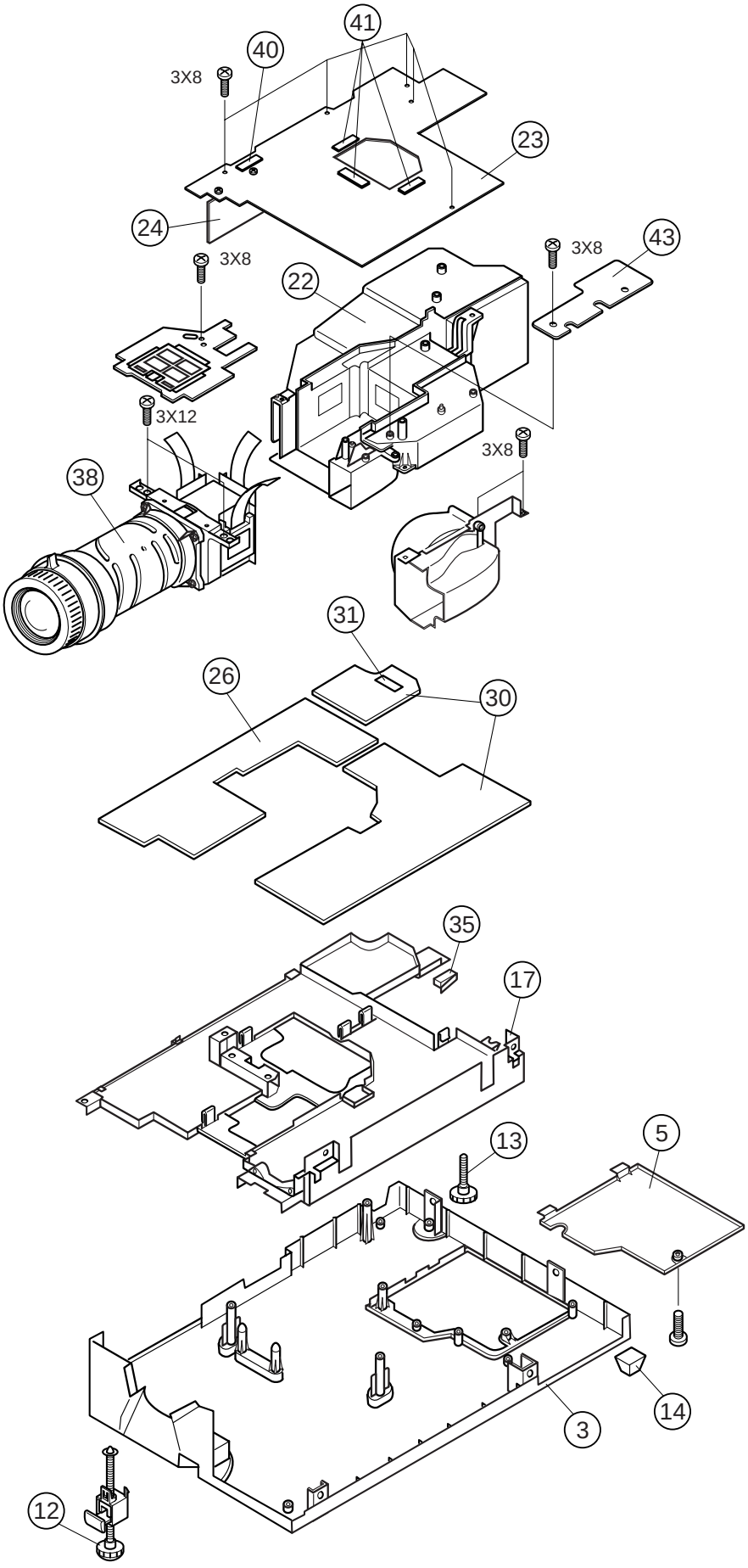
# PWB ass'y RGB (3/3)

## *11. Connector Connection Diagram*


Fan (Lamp)
Fan (Power)
Fan(exhaust)
Fan(intake)
1:FAN35 2:BLF 3:GND
1:POWER 2:GND
1:FAN2-S 2:BACK 3:GND
1:FAN1_S 2:BOTTOM 3:GND 4:N.C
1 2 3
1 2
1 2 3
1 2 3 4
EBLF
EPOF
EBAF
EBOF
PWB ass'y TEMPERATURE
TEMP GND
ETEP
PWB ass'y SW Micro switch
VCC(+12V) --- COVER_S ---
ELCO
PWB ass'y digital
EK01
EP01
1:IINGCLK 2:INGCREF 3:INGVS 4:INGHS 5:INGVDD 6:DIR 7:OVSYNC 8:+5V.D1 9:GND3 10:DATA2 11:CLK2 12:CS10 13:FCDATA 14:+5V.D1 15:R1D0 16:R1D1 17:R1D2 18:R1D3 19:R1D4 20:R1D5 21:R1D6 22:R1D7 23:G1D0 24:G1D1 25:G1D2 26:G1D3 27:G1D4 28:G1D5 29:G1D6 30:G1D7 31:G1D7 32:GND3 33:B1D0 34:B1D1 35:B1D2 36:B1D3 37:B1D4 38:B1D5 39:B1D6 40:B1D7 41:GND3 42:---- 43:---- 44:---- 45:---- 46:---- 47:---- 48:---- 49:---- 50:ATCCLK
100:VGBCLK 99:VGBCREF 98:VGVS 97:VGHS 96:VGVDD 95:VLREG 94:OVSYNC 93:REF.OUTCLK 92:/GMRST 91:OFSYNC 90:--- 89:POWER6 88:DATA3 87:CLK3 86:R2D0 85:R2D1 84:R2D2 83:R2D3 82:R2D4 81:R2D5 80:R2D6 79:R2D7 78:G2D0 77:G2D1 76:G2D1 75:G2D2 74:G2D3 73:G2D4 72:G2D5 71:G2D6 70:G2D7 69:GND3 68:B2D0 67:B2D1 66:B2D2 65:B2D3 64:B2D4 63:B2D5 62:B2D6 61:B2D7 60:GND3 59:G3D0 58:G3D1 57:G3D2 56:G3D3 55:G3D4 54:G3D5 53:G3D6 52:G3D7 51:ATCH
P801
P701
P901
LCD module ass'y (R)
LCD module ass'y (G)
LCD module ass'y (B)
1:PSIG 2:AGND 3:VSIG1 4:VSIG2 5:VSIG3 6:VSIG4 7:VSIG5 8:VSIG6 9:VSIG7 10:VSIG8 11:VSIG9 12:VSIG10
1:PSIG 2:AGND 3:VSIG1 4:VSIG2 5:VSIG3 6:VSIG4 7:VSIG5 8:VSIG6 9:VSIG7 10:VSIG8 11:VSIG9 12:VSIG10 13:VSIG11 14:VSIG12 15:HVDD 16:RGT 17:HST 18:HCK2 19:HCK1 20:AGND 21:AGND 22:BLK 23:ENB 24:VCK 25:VST 26:DWN 27:HB 28:VB 29:PCG 30:VVDD 31:COM 32:N.C.
PWB ass'y drive
ESD1
1:FAN.+12V 2:FAN.GND 3:+16.5V 4:+6.3V 5:GND 6:+16V 7:GND 8:+5V.DA 9:GND 10:+5V.D2 11:GND 12:+5V.D1 13:GND 14:+5V.A0
PWB ass'y input terminal video
EVS1
ESV1
ESI1
EIS1
VIDEO IN-1
Y/C IN-1
AUDIO L IN
AUDIO R IN
VIDEO VIDEO GND Y SIGNAL Y.SIGNAL.GND C.SIGNAL +9V Y_SELECT L AUDIO GND R
1:SECAMOFF 2:SECAMSEL 3:3LINE 4:VIDEO.SYNC 5:VIDEO.H 6:VIDEO.V 7:JUDGE 8:SCLO 9:SCA0 10:VIDEO.R.GND 11:VIDEO.R 12:VIDEO.G.GND 13:VIDEO.G 14:VIDEO.B.GND 15:VIDEO.B 16:GND 17:-5VST 18:GND 19:+5VS5 20:+5V.AD 21:POWER6 22:POWER.OFF 23:MUTE 24:VOL 25:V/R 26:R1/R2 27:POW.EX
EID1
EDI1
----- ----- ----- GND VOL VOL MUTE GND POWER6 SDA0 SCL0 GND JUDGE RXD TXD GND MOUSE REMOTE POWER.OFF POWER.EX GND SECAM.OFF SECAM.SEL VIDEO.SYNC GND VIDEO.V VIDEO.H GND RGB.V RGB.H GND 3LINE V/R R1/R2 GND B.GND B B B B.GND G.GND G G G G.GND R.GND R R R R.GND
PWB ass'y signal
AUDIO IN-1
AUDIO IN-2
AUDIO OUT
PWB ass'y input terminal RGB
RGB IN-1
RGB IN-2
RGB OUT
CONTROL
E4L
E4R
1: SP-L 2:---- 3:SP-GND
1: SP-R 2:SP-GND
AC INLET
AC SWITCH
EPOW
1:FAN.+12.5V 2:FAN.GND 3:+16.5V 4:GND 5:+13V 6:AUDIO.GND 7:+6.6V 8:+6.6V 9:+6.6V 10:GND 11:-7V 12:POWER_OFF
CN301
PWB ass'y filter
CN102
Power unit (circuit)
CN101
DC IN ---- GND
CN701
CN703
Power unit (ballast)
:POWER ON/OFF :GND :LAMP MISS
EBA
LAMP
EC01
EH01
PWB ass'y color
1:+15.5V 2:+5V 3:GND 4:H 5:V 6:SCL 7:SDA 8:GND 9:B-CU 10:R-CU

## 12. Disassembly Diagram




41
40
3X8
23
24
3X8
22
3X8
43
3X12
38
3X8
31
26
30
35
17
13
5
14
3
12

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# FOR THIS MODEL IS

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